

# THE Soybean Digest

## Sampling and Grading Soybeans for Processing



**U. S. soybean products at the Munich Fair**

NATALIE USSELMANN fries chicken in U. S. vegetable shortening at Munich food fair. Left to right, Herbert Ford, USDA; Fred Marti, European representative, Soybean Council of America; Miss Usselmann; Wilbert E. Hugs, Central Soya Co., Fort Wayne, Ind.; and William E. Preston, exhibit manager, USDA.

**NOVEMBER • 1958**

**VOLUME 19 • NUMBER 1**

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# THE Soybean Digest

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Soybean Council of America, Inc.  
HUDSON, IOWA

Vol. 19 November, 1958 No. 1

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## THE SOYBEAN DIGEST

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practical and scientific phases of the prob-  
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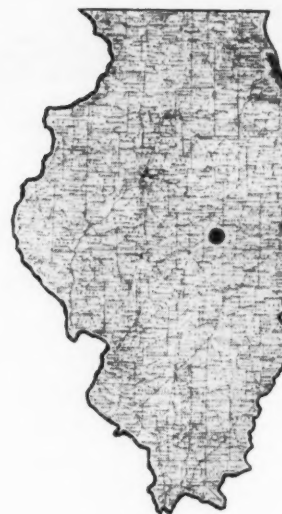
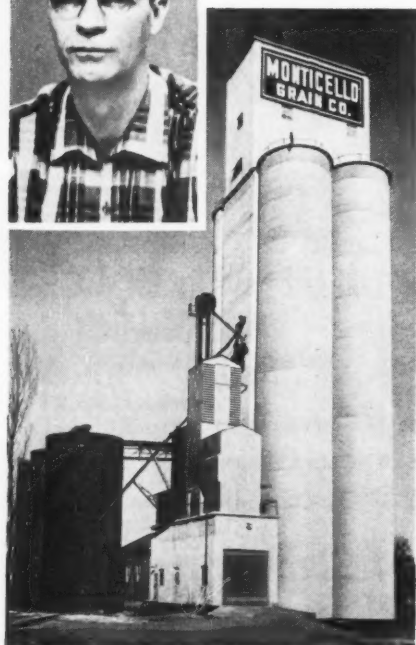
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Fourth in a series from  
state experiment stations

SOYBEAN variety test  
plots at Southeast  
Georgia Branch Ex-  
periment Station at  
Midville.



By J. B. WEAVER, JR., and HASKELL HARRIS

# Soybean Research in Georgia

THE ACREAGE of soybeans for oil in Georgia has increased from 60,000 acres in 1955 to about 96,000 acres in 1957. This increase has occurred in spite of the low state yield (13 bushels per acre in 1957).

Although the state average yield is one of the lowest in the country, it is not uncommon to obtain yields up to 40 bushels per acre in variety trials conducted under field conditions. For example, of three tests harvested in 1956 and 1957 at the Southeast Branch Experiment Station located near Midville, Ga., the average yield of all varieties was 33 bushels per acre with some varieties producing over 40 bushels.

Since it is common knowledge that good yields can be obtained, why is the state average so low? There appear to be several contributing factors, and foremost among these are poor stands and drought stress during flowering and early pod formation.

At least 75% of the Georgia acreage is planted on land shortly after a small grain crop is harvested. Poor soil moisture conditions and high soil temperatures which exist on these stubbles contribute to poor stands. Drought stress, which is common during the period of flowering and pod development on these late-planted soybeans, often severely reduces the yield.

Low soil fertility is also a contributing factor. Many growers depend

on the soil to supply the fertilizer elements necessary to grow a crop of soybeans. This is especially true when the previous crop was fertilized moderately or heavily.

How is the research program attacking the above problems? Variety tests are being conducted at seven locations over the state to evaluate varieties and strains under different environmental conditions. At three locations cooperative tests with the U. S. Department of Agriculture are planted to evaluate all strains developed in the Southeast.

Fertility studies are being conducted in the Coastal Plain and in the Piedmont Region. A 3-year study just completed at Experiment, Ga., (Piedmont Region) indicated that soybeans respond to applications of nitrogen, phosphorus, potassium, and lime when planted on soils deficient in these components.

Studies on method of inoculation and effect of molybdenum on soybeans have been conducted for the past 3 years at the College Experiment Station at Athens, Ga. Due to adverse weather conditions the results from these tests are inconclusive; however, it appears evident that the use of syrup as an adhesive for inoculum would be beneficial, and that application of molybdenum on unlimed fields would give yield increase. These studies are being continued.

RANDOM watering with 1 ounce of water per hill in half the rows. Rows with few or no plants are check rows that received no water. Three crops shown are soybeans, grain sorghum and cotton. With a machine that would apply the water in immediate contact with the seeds a farmer by use of 100 to 200 gallons of water per acre could get a stand. Otherwise he might have a crop failure due to poor stand. This experiment is not mentioned in the article.

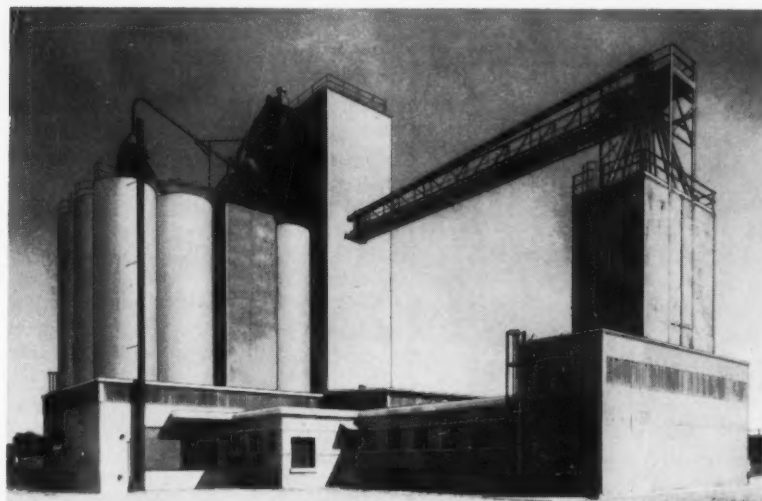


Date of planting studies have been conducted at several locations over the state. Results from these tests indicate that adequate stands are less frequently obtained from late plantings (June) than from early plantings (late April or early May). At a given location, if good stands are obtained from both early and late planting, the yield difference is usually slight but in favor of the early planting. It appears that some varieties start flowering too early and are reduced in vegetative growth if they are planted in early April

while the day length is still fairly short.

An investigation of the effects of various pre-plant tillage practices on small grain stubble on the emergence and yield of soybeans will be started in 1958.

Breeding work is being conducted at the Georgia Experiment Station, Experiment, Ga. This program is directed toward development of strains adapted to June planting, since most farmers are interested in planting soybeans after small grain harvest.



New McMillen Feed Plant at Des Moines.

## McMillen Dedicates New Feed Plant

WITH AN open house, barbecue luncheon and formal dedication ceremony on Oct. 2 attended by more than 6,000 people, McMillen Feed Mills unveiled its new "auto-syntronic" feed manufacturing plant at Des Moines, Iowa.

The new plant, which combines storage, conveying and mixing systems in a manner believed unique in the industry, is reputed to be one of the most efficient and highly automated feed production units in the country today.



Jack E. Chappell

Situated on 5 acres of a 35-acre tract in northeast Des Moines, the new plant is designed for rail or truck transportation, and for producing concentrate and complete livestock and

poultry feed in meal, pellet or crumble form. Finished products can be shipped in either bagged or bulk form at 100% of rated capacity.

Initial production calls for 200 tons of concentrate or complete feed in an 8-hour day, with a total administrative and production force of approximately 20 persons.

### Receiving and Storage

With the exception of a few low-percentage ingredients, all materials are received, stored and handled in bulk form.

Grains and other dry ingredients received by rail or truck are unloaded by means of a standard track hopper or a 50-foot, 50-ton truck dump onto a mechanical belt conveyor. After passing through a magnetic separator, where all tramp metals are removed, the ingredients enter a pneumatic suction conveyor system.

Entering the plant as an air-fluidized stream, the air and the ingredients are separated in a cyclone system, with the air passing through a stocking dust filter and the ingredients passing through a scalper for removal of non-metallic foreign material.

Following the dust collection and scalper-screening operations, a separate pneumatic conveying system moves the ingredient stream to any of four pneumatic lines which rise more than 100 feet to turnheads located in the uppermost levels of the plant. From these turnheads, the flow is directed to spouts discharging into any of the plant's 29 bulk storage ingredient bins located adjacent to the mixing and bagging areas.

### Auto-syntronic Mixing

The heart and brain of the plant's three-phase mixing operations is an electronic marvel which "reads" a pre-punched card, actuates a series of dry ingredient feeders and liquid metering pumps and records their delivery of ingredients throughout the entire auto-syntronic mixing operation.

When a pre-punched card, calling for a formula approved by McMillen feed research headquarters, at Decatur, Ind., is inserted into the "reader" on the master control console, two separate and simultaneous mixing cycles are begun.

Screw-type feeders, radially tiered around a 5,000-pound hopper scale located beneath, and in the center of, the ingredient storage bins, deliver the high-percentage dry ingredients called for in the formula. A separate system of vibrating feeders deliver low-percentage ingredients from a series of circularly arranged hoppers to a 50-pound hopper scale located close to the main hopper.

When the correct charge for both has been delivered, each hopper is unloaded to a gate-connected mixer. After prescribed mixing times have elapsed, and the 50-pound mixer's charge has been delivered for mixing with the main hopper's charge, selected liquids are metered into the primary blend. An interlocked gate assembly discharges the nearly finished feed to a waiting surge hopper beneath the primary blender.

During the first two stages of the three-phase mixing cycle there are three feed formulations being produced simultaneously; one being weighed, another being mixed and a third in surge hoppers ready for the



final stage of production. Thus the precision of batch-type mixing is combined with the volume of continuous-flow methods.

The addition of liquids during the primary blending stages is accomplished by electronically controlled, pre-set proportioning dials which "call" on electro-hydraulic pumps to deliver selected liquids to a 30-gallon surge tank. From the surge tank, through the use of interlocked pressure switches and solenoid valves, the pre-mixed liquids are handled just as any other ingredient on the master programming console.

#### Bagging and Pelletizing

From the surge hoppers beneath the primary blender, the nearly finished feed is air-conveyed to the top of the mill and discharged into holding bins located over automatic bagging scales. Gravimetric feeders, located beneath the bins, deliver the feed to a final blender, where remaining liquids are electronically metered into the formula. Just as in the addition of primary liquids, the metering system delivers the desired amount and, at the same time, indicates and records the delivery on the master console.

Following final blending, the feed is ready for bagging, pelletizing, crumbizing or conveying to bulk loading bins.

Bagged feeds are loaded out directly from the bagging operation, or from warehouse supplies. Bulk feeds, in meal, pellet or crumble form, can come directly from production, or from bulk loading bins positioned over a 50-foot, 50-ton truck scale.

#### Distribution Area

Under construction since early in 1958, the new plant will distribute McMillen's Master Mix concentrate protein supplements and complete feeds throughout the state of Iowa. Jack E. Chappell is plant manager.

Though this is the first production operation west of the Mississippi River, the company has feed manufacturing plants located at Gibson City, Ill.; Decatur, Ind.; Marion, Ohio; Chattanooga, Tenn.; Harrisburg, Pa.; and Memphis, Tenn. Soybean processing operations are conducted at the first four locations, at Chicago, Ill., and Indianapolis, Ind.

The company was founded in 1934 by Dale W. McMillen, with soybean processing and feed manufacturing operations at the Decatur, Ind., plant. Executive offices are located in Fort Wayne, Ind.

## ORDERLY MARKETING OF SOYBEANS ASSURES A SOUND INDUSTRY

The general technique of moving soybeans through the normal channels of trade by government assistance in the marketing of the oil fraction is of tremendous significance. It is vastly superior to the system devised primarily for grains and cotton of government *loans and CCC acquisitions*, for the following reasons:

1—The increase in net farm income is greater than any possible government costs.

2—More soybean meal is available at reasonable prices, thus providing better balanced rations and better net returns to livestock and poultry producers.

3—The soybean crop moves into consumption and not into government storage.

4—Exporters and importers of soybeans are commercial buyers in the open market—not "bar-gain hunters" from government hoards.

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#### Dr. Renfrew Returns to University of Idaho

ONE OF THE nation's leading industrial research scientists, Dr. Malcolm M. Renfrew, will return to his alma mater, the University of Idaho, to become professor of chemistry and head of the department of physical sciences. He will succeed Dr. William E. Cone as department head effective Feb. 1.

Dr. Renfrew has been director of research and development for Spencer Kellogg & Sons, Buffalo, N. Y., since 1954 and has served in similar capacities for DuPont and General Mills.

Now on terminal leave from Spencer Kellogg & Sons, Renfrew plans to spend the next few months in Europe where he will study the physical science departments of universities and colleges of various countries.

Art Garrott, recently retired general freight agent of the GM&O Railroad in Kansas City, has been appointed by the Alabama State Docks to work with shippers in Kansas City and surrounding area.



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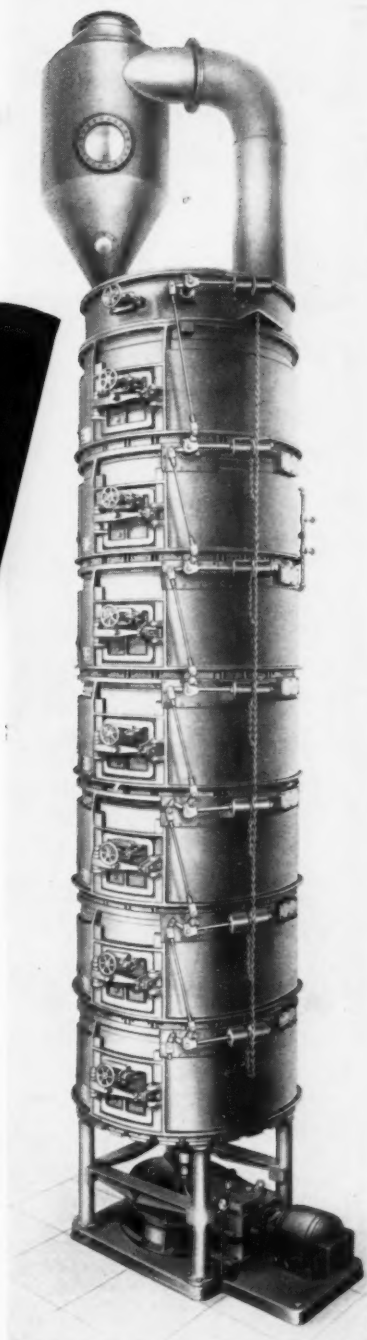
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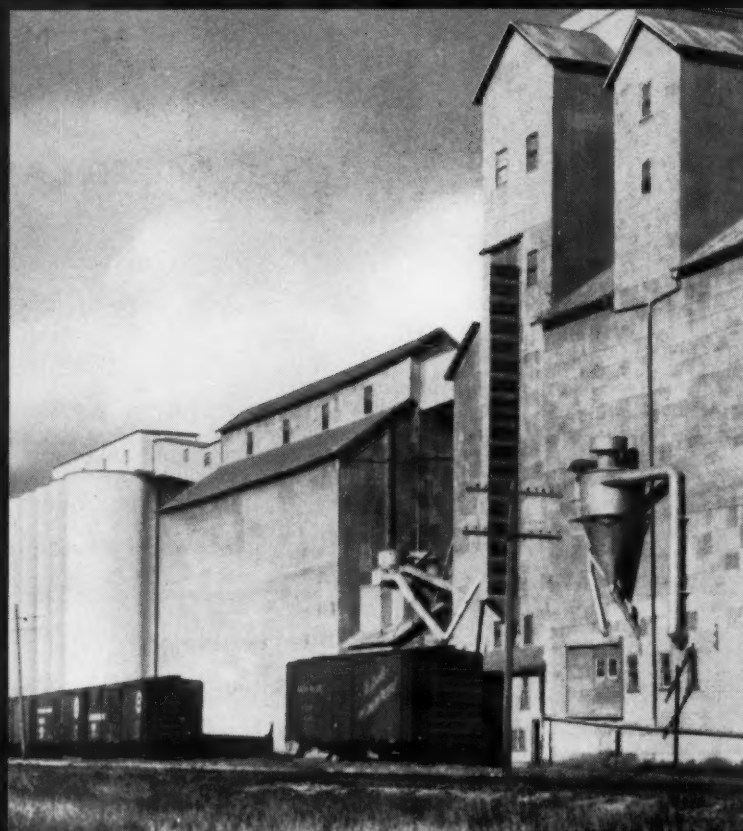
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# THE NEWS IN BRIEF

## THE CROP, MARKETS AND OTHER ITEMS OF NOTE

### Lower Freight Rates

A reduction in railway freight rates on soybean shipments for export from the Southwest and South to Gulf ports went into effect Nov. 1. The reduction is approximately 5¢ per 100 pounds depending on location. Points affected include southern Illinois, parts of Kentucky and southern River points.

Interstate Commerce Commission on Oct. 27 vacated a suspension of the lower rates.

A pending freight rate decrease of 7¢ per 100 pounds on soybeans and animal and poultry feeds containing soybeans and soybean cake and meal in westbound shipments from Midwest States west of the Mississippi River has been announced by Transcontinental Freight Bureau, Chicago. The rates are to apply to minimum carload shipments if and when they go into effect.

### Chinese May Cut Into U. S. Export Markets

It's believed in Washington that Red China may have enough beans this season to cut some into U. S. export markets. (See Washington Digest page 34.)

Trade News Service, New York, quotes international oilseed trade sources to the effect that China has been booking vessel space at an accelerated rate in recent months. Quoting TNS: "Advices coming from foremost charter brokers in Hamburg, Bremen, Rotterdam and London indicate that China has booked more than 1.5 million tons of space since March. Red China has been consistently chartering vessels in recent months in Holland, Germany and even New York.

"The bulk of the tonnage is for the Continent to China and return. Cargoes from the Continent will carry large quantities of fertilizer, cement and general cargo, while the return trip from China will carry large quantities of grain and oilseeds for the Continent."

### Mobile, New Orleans Embargoed

A rail embargo on the Port of New Orleans involving soybeans and grains went into effect Oct. 31. With over 3,000 rail cars tied up it appeared that the embargo might apply for some time.

About 100 barges were also reported tied up at the Port, but there was no embargo on barge lines when the Digest went to press.

A rail embargo on the Port of Mobile was also in effect.

The tail end of the harvest resulted in some shortage of storage space in Illinois, and we had reports of congestion at some points.

Kentucky elevators reported some difficulty in finding enough storage capacity to handle the rapid harvest of a bumper crop, according to the state's crop reporting service. B. E. Henline, Soy-Rich Products, Inc., said there was no elevator storage available for soybeans in south central Kansas. And Harold Lumsden, Essex Grain Co., Essex, Mo., wrote, "We are afraid the tail end will find no place to go."

T. A. Hieronymus, University of Illinois agricultural economist, reports that soybean processors filled most of their storage. Storage space in the country was not sufficient to take care of the late harvested crop, but most of the overrun was not in the central soybean belt, according to Hieronymus. He said the worst trouble spots were in southern Illinois, Indiana and Ohio.

### Look for Big Loan Program

The Department of Agriculture expects 125 million bushels of 1958-crop soybeans to go under loan and purchase agreement. And a leading Illinois processor has predicted that 150 million bushels will go under support.

Our local reports on the prospect for use of the price support program:



W. W. McLaughlin, Citizens National Bank, Decatur, Ill., says 90% of the crop in the Decatur area has been stored and unless the price goes up to \$2.15 a very large percentage of the beans now stored will be sealed.

J. B. Edmondson, Danville, Ind., noted that the lower price in late October was causing interest in government loans. He believes most of the 30% of the crop now in storage in south central Indiana will eventually seek loans.

A Webster County, Iowa, report is that close to 100% of the crop will go under government support either now or after Jan. 1.

According to J. G. King, Lubbock, Tex., it appears that the entire crop from the Texas high plains area will go into Commodity Credit Corp. loan. The reason is the drop in oil price. Processors are not buying the beans.

#### **Harvest Under Way In South**

With favorable harvest weather, combining was making good progress in the Midsouth and Southeast the last of October. Reports were that substantial parts of the crop were out of the field in Arkansas, western Tennessee, Virginia and northeast Louisiana. George E. Spain, Raleigh, N. C., reported that harvest was about to start in North Carolina Nov. 1.

Quoting Walter M. Scott, Tallulah, La.: "We have had 3 weeks of perfect weather and harvest is in full swing. Cotton is opening late and yields are not coming up to expectations. May help local bean markets. My beans are several bushels under what I thought they would be."

Harvest was almost complete in Missouri, Kansas and the Dakotas, as well as the main northern bean belt Nov. 1. (See page 24 for detailed crop report.)

#### **Moisture Content Is Good**

Moisture content of harvested beans dropped as the season progressed and there should be few storage troubles in northern areas so far as moisture is concerned.

Ersel Walley, Walley Agricultural Service, Fort Wayne, Ind., reported that 100% of harvested beans in his area are safe to store.

But J. E. Johnson, Champaign, Ill., says local elevators report moisture averaged the highest of any crop they have ever received.

Moisture content of many beans in South Dakota, a drought area, was too low for good combining, according to the state's crop reporting service.

Drought is reported hurting the crop in Georgia and South Carolina. Harvest was just getting under way in downstate counties in South Carolina Nov. 1.

#### **Low Foreign Material Content**

Good combining resulted in low foreign material content in spite of very weedy fields in Ohio. Quoting Louis Brewster, Rossford, Ohio: "The grower apparently put his mind to the task and did a wonderful job of cleaning up the weediest crop I have ever seen." D. G. Scott Farm, Marysville, Ohio, reports lots of weeds, but the quality of the beans was not affected as the weed seeds were easily removed.

Reports of very high quality beans from the 1958 crop are general in Illinois. A Webster County, Iowa, report is that the crop was the best quality ever harvested in that area.

J. B. Edmondson, Danville, Ind., notes that poor combining adjustments in his area allowed many cracks and weed hulls to come through to lower quality.

The Minnesota crop reporting service calls quality fair to good in main producing districts except in the west central where it is only fair.

#### **Reports On Clark Variety**

Quoting Russell S. Davis, Clayton, Ill., "This has been a banner year for Clark variety. Its yields have been so far above Hawkeye and Harosoy that growers are asking for seed of it next year."

F. E. Hunt, Adair, Iowa, reports some damage to Hawkeye in his area. "They are just too late a bean for this locality."



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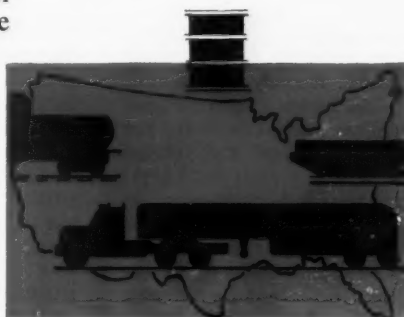


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# Sampling and Grading of Soybeans

## For Crushing Purposes

By R. T. DOUGHTIE, JR.

In charge supervision of cottonseed grading, cotton division, Agricultural Marketing Service, U. S. Department of Agriculture, Memphis, Tenn. From speech before Cooperative Oil Mill Conference at Mason City, Iowa.

**D**URING THE PAST few years there has been an increasing amount of discussion regarding the basis of purchasing soybeans for crushing, and it has been advocated by various sources that soybeans be purchased under a grading system which would provide a "value index" related to the quantity and quality of oil which could be produced from various types of soybeans produced. It might also be well to consider the variations of quantity and quality of protein in soybeans in arriving at a suitable value index.

We have seen soybeans from various areas of the large producing sections show a range of oil in oil producing beans of from approximately 14% to more than 22% when calculated to a 14% moisture basis. Certainly, there is a definite difference in the value of the soybeans with respect to available oil. Many producing areas will show variances of 3% or more for the same variety grown in a relatively small area.

A variation of available oil of 50 to 60 pounds per ton of soybeans when oil is selling for around 11½¢ per pound amounts to a sizeable sum of money. Quality factors to be considered in arriving at a suitable value index would be moisture, free fatty acids in the oil and foreign material.

I would suggest that you, as processors, give serious thought to the buying of soybeans on a basis of value. Certainly, it would encourage producers to produce more valuable soybeans since they would receive a higher return on their crops. Such procedure would place your own businesses on a sounder basis and you would know what you were buying as well as what you could produce from given lots of soybeans, thus eliminating the more or less guesswork as concerns such important matters as oil and protein which are not now reflected when you pur-

chase Grade 2 yellow soybeans or Grade 3, etc.

Sampling of soybeans may be done either before unloading, during unloading, or during the loading of shipments. While the sampling of soybeans accurately is not too difficult, it is most important that reasonable care be exerted in order to get uniform and representative samples.

### Sampling Tools

The Grain Standards Act specifies certain approved tools and equipment for use in properly drawing and preparing samples, the principal items of which are: a bulk grain probe or trier varying from 48 to 63 inches in length with a double tube construction having 10 to 12 slots 3½ inches long and 1 inch wide and spaced 1½ inches apart, the slots to open and close by manipulation of the handle of the probe; an approved sample divider, in most cases a Boerner divider, constructed with hopper, cut-off lever, inverted cone having 36 slots around the base of the cone with alternate slots cutting the sample to opposite containers; foreign material screens; moisture-proofed sample bags and air-tight containers; and scales sensitive to 1 gram or less.

For sampling sacked beans and carlot shipments, shorter probes or triers can be used more readily than the full length probes. The sampler should draw samples from at least five different locations in cars and trucks. More sampling locations should be probed if the soybeans are damaged or appear to contain considerable amounts of foreign material. I would recommend that a minimum of ¼ pound of beans be drawn for each ton of beans delivered, thus making a gross sample of 10 to 15 pounds to represent shipments of from 40 to 55 tons (approximately an average carlot quantity). The entire drawn sample



**PROBE** should reach completely through the beans being sampled.

should be cleaned for foreign material and divided a sufficient number of times to reduce the sample to proper size for sending to a qualified chemist for analysis. (I would recommend the chemist's sample be at least 1 to 1¼ pounds in size.)

All probes should reach, if possible, completely through the beans being sampled. In the case of the sacked beans, at least 10% of the sacks, taken at random throughout the load, should be probed, using a 35 inch to 38 inch probe and drawing the same amount of beans per ton delivered as specified above. The sampler should show all necessary weights for the sample drawn and the foreign material removed on his sampler's certificate in order to give the necessary data to the chemist for determining foreign matter present in the shipment represented by the sample.

In some cases where considerable shipments of beans are received from individual shippers, it might be advantageous to combine several cars or lots into the sample. We would recommend that in no case should more than 3 cars or equivalent amounts of truck beans deliveries be composited. It is considered quite important that the amount of sample from each car or truck composited be carefully weighted in making the gross sample in order that each load composited will bear equal weight in the analysis outturn.

Samplers of soybeans and many other commodities have tendencies at times to become careless and may



**COMPLETE** testing laboratory in charge of a graduate chemist provides for continuous analysis of soybean products in a modern soybean processing plant.

follow procedures of short-cuts and easy-way methods, such as drawing samples from only one spot, failing to draw good cross sections of various shipments, not drawing enough samples to be representative, not cleaning the samples properly and making improper divisions of the drawn samples, etc.

It has been noted in the sampling instructions for soybeans that the sample drawn "shall be not less than approximately 2 quarts." However, I have not been able to find in the instructions any specification as to the maximum or minimum number of bushels or tonnages this size sample should represent. I would recommend that the samples drawn, from the standpoint of accurate and representative chemical analysis, should not represent more than approximately 40 to 55 tons, except when composite samples are prepared, and then that the portions in such composites be weighted to fairly represent the tonnages from which the individual portions were drawn.

Analysis of samples of soybeans purchased by your mill and placed in storage, when properly weighted, will tell you definitely what you have purchased and paid for and also what you can expect to mill out of the commodities in accordance with your standard of operation. As the commodities are crushed, samples of the raw materials entering the mills should be taken and analyzed. These data, when weighted, will accurately indicate losses in moisture during storage, increases in

damage if any, and amounts of foreign material removed in the cleaners.

With proper adjustments, data on the beans crushed daily, weekly, etc., can be correlated back to the original data obtained when the commodity was received by you. Quality changes, such as increases in free fatty acids, odors and damage resulting from storage conditions can easily be spotted.

#### **Use Schedule**

As the soybeans are crushed a regular schedule of samples from each department of your mill should be established, such as daily, each shift, etc. Should faulty conditions in the manufacturing processes develop, the superintendents must be able to locate the proper department of his mill immediately in order to make necessary corrections or adjustments without having to painstakingly check all departments from start to finish before locating the trouble. Proper mill quality control reports compiled from accurate and representative sampling and chemical analysis can enable the mill superintendent to locate such faulty conditions in a minimum of time.

Examples of such troubles which may develop unexpectedly can be easily illustrated in the meal grinding department: Protein may be running high, well over the guarantee; or it may be running low, considerably under the guarantee. In the first case, if the condition is not promptly discovered, you will be giving away more value in the prod-

uct produced than you are being paid for (customers rarely, if ever, complain of receiving too much for their money); in the second case, if deficiencies in protein develop, particularly when more than the legal tolerance established by various laws, claims will result and sometimes lawsuits for violation of various state and federal laws.

All of this, and more, can be virtually eliminated by establishing in your mill a sound program of quality control sampling and analysis.

Sampling of the various products produced by soybean oil mills should be made as far as possible by completely mechanical means in order to obtain uniform and representative samples. By doing this, one of the greatest defects in sampling will be eliminated, the fallacies of the human element.

Fully satisfactory automatic samplers are manufactured by several of the prominent manufacturers of oil milling machinery. In all instances where such automatic samplers have been installed during the past several years, they have completely justified their cost. The units are relatively small and compact and are timed to draw small samples every minute and can be easily adjusted for drawing samples at longer intervals if desired.

Such samplers are easily attached to vertical columns or troughs leading from bin conveyors or elevators and the samples are taken regularly from falling streams of soybeans as well as the various products produced.

The thorough mixing and reducing of samples drawn for mill control is equally important as the sampling. This can be accomplished, also by mechanical means. If such means are not available, the large samples drawn should be placed on a clean surface and thoroughly mixed by turning over the sample by use of the hands or a small shovel or scoop for 5 to 10 minutes. (Do not stir since such procedure generally causes segregation of light and heavy particles.) The mixed sample should then be flattened out and quartered and the sample for analysis taken from opposite quarters. The samples when finally prepared should be placed in air-tight containers for sending to the chemist for analysis.

Proper correlation of analytical data covering receipts of your raw materials with the analytical data from each department of your mill can reliably show the probable gain or loss in your mill's operations if a proper system of accurate and representative sampling is carried out.



**WE** RECEIVE beans at our mill that will run anywhere from 10% to as high as 30% moisture in a few cases. These high moisture beans are watched closely and fans are kept on them to pull out excess moisture and prevent overheating.

Our first run on beans is usually at a lower through-put as a result of the higher moisture in the beans at the start of the season—180 tons to 190 tons per day being average. Later, after the beans are conditioned, we step up to as high as 220 tons per day.

### Cracking Roll

For the best cracking, a moisture of about 11% is ideal, with 13% being the top moisture a roll will take and crack the beans properly—six to eight particles being the average division, with 11% moisture and the rolls properly adjusted. If beans are too dry, more fines collect in the extraction column, and short filter cycles and higher residual oil are the result and solvent losses are usually higher. We use a two-high A. C. 10-inch by 42-inch cracking roll.

The cracked beans go through a three-high Anderson drier vented to a 24-inch stack to draw off any excess moisture and to help temper the beans for flaking. The temperature of the cracked beans will vary from 90° to 120° F. according to the amount of drying necessitated. From the driers the cracked beans pass over a shaker where the hulls are aspirated and blown by a fan to a cyclone and dropped into a hammer-mill and blown from here to another

# Solvent Extraction OF SOYBEANS

From his address before the Tri-States Oil Mill  
Superintendents Association at Biloxi, Miss.

By **FRANK L. McDONALD**  
Superintendent Planters Mfg. Co.,  
Clarksdale, Miss.

cyclone through a rotary valve into a line connected to a roots blower and thence to a cyclone in front of the toasters.

The cracked beans are conveyed to a tempering unit located over each roll where the temperature is raised to about 135° F. to facilitate flaking. We try to flake around .010 an inch which gives us around .1% residual oil at 210 T/D as long as we keep our flake level in the column up at the top. The flakes from these rolls are then conveyed to the top of the extractor in the solvent plant.

The extractor consists of a series of plates with a central shaft and revolving sweeps above each plate. The flakes are conveyed into the column by a short vertical screw through an upward current of solvent. The solvent is introduced at the bottom of the extractor and flows upward through the column extracting the oil from the flakes and overflowing into the miscella tank. This miscella (80% solvent, 20% oil) which is the name commonly used for the solvent oil mixture, is pumped through a filter into a filtrate tank. This clarified miscella is then pumped through a preheater where its temperature is raised to the boiling point of the solvent, about 155° F. The heated miscella passes into the bottom of a high velocity rising film evaporator.

This evaporator discharges into an expansion chamber where the solvent vapors pass overhead through the preheater to the evaporator condenser and into the solvent water separator. The oil settles in the bottom of the expansion chamber.

This oil with a temperature of 250° F containing about 8% to 10% solvent is then drawn into the vacuum stripping column. This column consists of a series of bubble cap trays, down which the oil flows from tray to tray. Raw steam is passed up through the descending oil to remove the last traces of solvent.

The oil leaves the strippers at 250°-260° F., is cooled and pumped out to storage. This steam and solvent vapors are drawn by vacuum, about 22-inch HG, to the stripper condenser and thence to the solvent water separator by gravity. The solvent from this separator overflows to the solvent work tank and is recycled through the extraction column. The water overflows to the sewer as waste.

The extracted meal at the bottom of the extraction column is elevated by a Link Belt Bulkflo to a drag chain type conveyor located about 6 feet above the top of the extraction column to allow solvent to drain back to the column before the meal is passed on into the driers.

These driers, five in all, desolventize the meal by means of jacketed steam and also live steam is used to add moisture as well as to desolventize. The vapors are washed by hot water sprays in a vapor scrubber to remove fine meal and the vapors pass on to the drier condenser and into the solvent water separator to be recycled along with all the rest of the condensed solvent. The meal leaves those driers through a plug seal at about 225° F. and on to the toasting room to be toasted and prepared for cooling and grinding.

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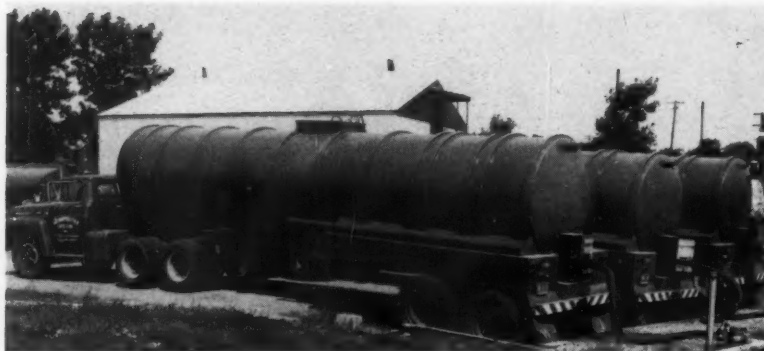
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## Firm Offers Unique Oil Operation

A BAYONNE, N. J., dealer, Metropolitan Fats & Oils, Inc., is conducting a unique operation in moving soybean oil purchased from Midwest points to New York harbor.

The operation is conducted in three steps. (1) The firm has its own fleet of 47,000-pound-capacity trailer trucks that pick up the oil from producing areas in Illinois, Indiana and Ohio and (2) deliver it to the company's tank farm in Toledo where it accumulates in storage. The third step is movement of the oil by barge from Toledo to the Port of New York for subsequent storage and sale.

Metropolitan has been loading three barges per month of 2,500 tons of soybean oil each during the months the Lakes are open.

The firm's tanktruck fleet consists of 20 new tractors and trailers,

each tankwagon being able to carry a payload of 45,000 to 47,000 pounds, depending on the weight laws in the states traveled.

Metropolitan's tank installation now consists of six storage tanks with a capacity of more than 14 million pounds. Each tank has steam coils working from a central steam boiler. This setup makes it possible to apply controlled heat to the storage tanks during the colder months and to move products through the tanks during the winter.

A newly constructed pier with adjoining clusters of pilings affords excellent berthing facilities for both barges and tankers.

The firm has two centrifugal pumps for loading the vessels that enable it to pump out two storage tanks simultaneously. A barge of 2,400 short tons can be loaded in 6 hours or less.

Metropolitan Fats & Oils, Inc., began its operation during the latter part of the 1957 barging season and moved three barges of soybean oil. This year it expects to move at least 30 barges.

### Band-Spraying Offers Low-Cost Weed Control

BAND-SPRAYING a 12- to 14-inch strip over the row as corn or soybeans are planted, followed by a later cultivation, offers complete, low-cost weed control. That is what Earl C. Spurrier, University of Illinois agronomist, told farmers attending the Farm and Home Festival at Urbana.

Giant foxtail, one of the most troublesome weeds, has been successfully controlled with Radox band-sprayed on the soil before the crop comes up. Getting rid of this weed in heavily infested fields may increase corn yields by 30% and

soybeans by 60%, according to research conducted at the University.

Wendell Bowers, extension agricultural engineer, urged farmers who use the band-spraying method to make the band about 12 to 13 inches wide. He also suggested keeping pressures low—under 40 pounds per square inch to keep spray drift to a minimum.

Nozzle tips for sprayers should be selected for use with this lower pressure. Farmers should not hesitate to change nozzles if they can't get the correct discharge at pressures under 40 pounds.

Bowers emphasized the need for accurate calibration of equipment in order to do successful band-spraying. He suggested using a ground-speed indicator in the field. But if that is not available, he pointed out that farmers could figure speed by determining time and distance. A speed of 1 mile per hour is about equal to 88 feet per minute.

### Bragg City, Mo., Girl Soybean Festival Queen



—Photo Portageville Missourian

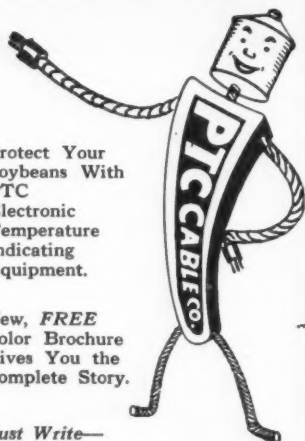
CHOSEN QUEEN of the National Soybean Festival at Portageville, Mo., was Ruth Ann Kegley, 18, of Bragg City, Mo.

The blond and blue-eyed beauty is a freshman majoring in music at Arkansas State College this year. She is the daughter of Mr. and Mrs. Roy Kegley of near Bragg City.

Miss Kegley was also named queen of the American Legion Fair at Caruthersville, Mo., and made a three-state tour for the Legion following the event.

She was sponsored by the Wardell, Mo., Rotary Club in both events.

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# Caribbean Is a Growing Market

A GROWING market for U. S. produced soybean oil meal and mixed feeds, and for U. S. vegetable oils was found in Mexico and Caribbean countries by a government-industry team sponsored by the Soybean Council of America and the U. S. Department of Agriculture. The team surveyed the area in late summer.

The members of the team were Albert M. Kohl, director of foreign operations for Spencer Kellogg & Sons, Inc., and Volorus H. Hougen, marketing specialist, fats and oils division, Foreign Agricultural Service.

The men reported there is considerable copra production in the area, including Mexico, Jamaica, the West Indies Federation, British Guiana and Surinam, but there is need for additional supplies of oils and meal.

Following are the highlights of the team's report:

**Mexico.** Efforts toward self-sufficiency in the long run may reduce dependence on imports, but it is thought that imports of oil cakes and meals, mixed feeds and soybeans will continue to be needed to supply increasing livestock requirements for the next few years.

Livestock production and feeding, including swine and broilers (poultry) and the dairy industry, are growing rapidly with an increasing need for protein meals for balanced feeds. The Mexican market for U. S. soybeans and cakes and meals is expected to increase. Imports of soybeans probably will be established soon due to the availability of unused crushing capacity.

Processing plants are mainly of the screw press type, and the capacity is said to be in excess of oilseed production. If soybeans are imported to supply the mills, this will reduce imports of soybean oil, cake and meal.

There is no great deficit of edible oils. Edible oil import needs are likely to vary from year to year depending on crop conditions, availabilities of oil for other currencies and barter arrangements with other countries.

The Rockefeller Foundation and the Mexican government are trying

to establish soybean production in Mexico. Certain varieties have been found to be adapted in the irrigated cotton and wheat areas, though they are not expected to replace these crops to any great extent.

**Cuba.** The Council can lend technical help to further increase the use of soybean oil meal in animal and poultry husbandry. The Cuban market is primarily a lard market for the fat portion of the human diet but there is also a need and demand for edible liquid oils. One source pointed out that if there were hardening facilities for liquid oils in Cuba, it would help greatly to increase the consumption of soybean oil.

Harry Graham, Cuban representative for the H. H. Pike Co., and R. Suaro, Cuban estate manager, both believe it is possible to grow soybeans in Cuba. Mr. Suaro had a planting of 300 acres which was progressing very satisfactorily until attacked by insects. The insect damage was not yet ascertained.

A new soybean processing plant of the screw press type with a capacity of 1,000 metric tons per month will begin operations Dec. 1.

**Jamaica.** Only about 20% of the Jamaican people are wage earners. The rest have a low subsistence level. There is a protein deficiency among the poorer class.

The Jamaicans are about self-sufficient in their edible oil requirements through their copra plantings and copra imports, but their entire production could be wiped out by a hurricane.

Meal requirements for livestock are growing and in the future a substantial tonnage could be imported.

**Haiti.** The basic vegetable oil crop is cotton, but its production is declining. To supplement the cotton crop considerable quantities of soybean oil are imported every year and looked on with favor.

There is no organized feeding program. Livestock is owned by small farmers, each with an animal or two.

**Dominican Republic.** The entire requirements for edible oils are supplied by the home-grown peanut crop and, if a shortage occurs, by peanuts imported from the United States or Africa.

**Island of Curacao.** Entirely an import economy supplied principally by U. S. produced soybean oil. Its needs are adequately cared for.

There is a substantial quantity of mixed feeds containing soybean oil meal imported from the United States and sold in one or two bag lots to small farmers.

**West Indies Federation.** The oil prospects here are entirely dependent on what happens to copra production. If deficits of major proportions occur, an effort should be made to keep people conscious of soybean oil.

There is interest in increasing poultry flocks and cattle herds.

**British Guiana.** The principal oil producing material is copra, which of late is in a deficit position. Both copra and coconut oil are being imported.

Some mixed feeds are being imported and U. S. sellers are providing some technical assistance.

**Surinam.** Coconut palm is the chief source of edible oil but is insufficient to meet oil requirements.

U. S. feed manufacturers are selling in volume and doing a good job. There is some poultry industry, which is mainly among small farmers.

**Bahamas.** An import economy, with edible oil requirements being met by imports of branded packaged oils from the United States and some from Europe. Margarine and shortening are also being imported from the same countries.

Some feed is being imported for poultry and cattle. This is a complete mixed feed as there are no local products to which concentrates can be added.

## German Bulletin Covers World Fats, Oils Markets

OIL WORLD is a new mimeographed bulletin issued fortnightly to cover the world fats and oils and oilseeds markets, by Internationale Statistische Agrarinformationen, Hamburg, Germany. All editions are available in German and English.

The publication is devoted to statistical analysis of world fats and oils markets. Included are statistical information and weather and crop reports from the various oilseed producing countries of the world.

For further information write Siegfried K. Mielke KG, Internationale Statistische Agrarinformationen, Hamburg John-Brinkman-Weg 10, Hamburg-Gestacht, Germany.

**SOYBEAN COUNCIL  
OF AMERICA, INC.**



## Council Officials in Asia, Europe

THE FAR-FLUNG global character of the joint effort of the Soybean Council of America and the Department of Agriculture to market U. S. soybeans and soybean products in foreign markets is pointed up by the fact that the Council's president and its executive director are now both out of the country, one in Europe and the other in Asia.

President Howard L. Roach left his home at Plainfield, Iowa, for Europe Oct. 12. After a few days at the Council's European office at Rome, he went to Israel and Austria in connection with possible market development projects in those countries.

Then he went to Bonn, Germany, to meet with the Association of German Oil Millers and to complete the operating agreement with the German group for a soybean market development project in Germany under P. L. 480.

He is returning home Nov. 10.

Later, President Roach will participate in a U. S. solo fair sponsored by the U. S. Department of Commerce at New Delhi, India, Dec. 10 through Jan. 10.

The Council's executive director, Geo. M. Strayer, left the United States Oct. 17 as part of a three-man team now making a survey of Far Eastern countries to investigate the possibilities for market development for U. S. oilseeds, oils and vegetable proteins in those countries.

Other members of the team are E. M. Deck, Anderson, Clayton & Co., Dallas, Tex.; and V. M. Hougen, Foreign Agricultural Service, Washington, D. C. Mr. Deck and Mr. Strayer are accompanied by their wives.

Places to be visited include Hong Kong, Singapore, Malaya, Burma, India, and Pakistan. The team will be gone approximately 2 months.

Other areas where it is planned in coming months to send joint Soybean Council-USDA teams for surveys of potential markets for U. S. soybeans and soybean products include North Africa and Mediterranean countries, Mexico and Central America.

### Show Many Soybean Uses At Munich Food Fair

THE SOYBEAN demonstrated its great versatility at the international food fair at Munich, Germany, Sept. 25 through Oct. 5. The food fair, one of the largest in Europe, attracted a record number of visitors. Forty-four countries had food exhibits on display.

The large number of food uses of this farm product was shown in the soybean exhibit itself and in the types of oil used to cook high quality foods in the various sections of the overall U. S. exhibit.

U. S. fried chicken was cooked



**SOY PRODUCTS** at the Munich food fair are examined by, left to right, Wilbert E. Hugel, Central Soya Co.; Josef Wienken, office of Agricultural Attache, Bad Godesberg, Germany; Marlies Behrens, who is Miss Germany 1958; and Fred Marti, European representative, Soybean Council of America, Rome.

in pure vegetable shortening whose principal ingredient was soybean oil. Comments from German visitors, both consumers and trade representatives, about the U. S. fried chicken were extremely favorable.

A similar use of soybean oil was made at the demonstrations of cake mixes—another popular activity at the U. S. exhibit that attracted hundreds of German housewives daily.

A further demonstration of the versatility of the soybean was at the doughnut section of the exhibit, where 100,000 doughnuts made of U. S. products had been given away by the halfway point of the fair. The doughnuts were cooked in a shortening that was a mixture of soybean oil and lard, with soybean oil being the major ingredient.

West Germany at present is second only to Japan in the imports of soybeans. In calendar year 1957 Germany imported more than 23 million bushels, virtually all from the United States.

A great deal of attention at the fair was given to soya breakfast foods, soy flour, and foods in which the oil is used, such as margarine, salad dressings, and shortening. All these food products, along with samples of U. S. and German meal, were on display.

German visitors to the exhibit repeatedly asked when American soy



**AT THE INTERNATIONAL food fair, Munich, Germany.** Left to right, Eugen Leibfried, state minister of agriculture for Baden-Wuerttemberg; Alois Hundhammer, Bavarian state minister of agriculture; and speaker Thomas Wimmer, Lord Mayor of Munich. U. S. soybean exhibit is in background.





**DIRECTOR GENERAL of Livestock, Angel Campano Lopez, speaks at the closing session of the week of studies on animal nutrition at Reus.**

products would be available on German markets.

The soybean exhibit was sponsored by the U. S. Department of Agriculture with the cooperation of the Soybean Council of America.

Soybean trade representatives in Germany with the exhibit were Fred Marti, European manager, Soybean Council of America, Rome, Italy; and Wilbert E. Huges, vice president of Central Soya Co., Fort Wayne, Ind.

## Hold Nutrition Seminar in Spain

**By JAVIER DE SALAS**

Director General for Spain, Edificio  
Espona, Madrid

REUS IS a small town of 40,000 people located in one of the most fertile areas of Spain. Poultry population surpasses by far the human one. The rate is about 100 chickens per inhabitant. Thirty-five percent of the nation's poultry industry is at Reus.

This might give an idea of the reason why the Soybean Council in Spain chose as one of her main cooperators the Poultry Cooperative of Reus. Since the Soybean Council started working in Spain the Poultry Cooperative has become one of the most enthusiastic backers. This is why the week of studies on animal nutrition was held in Reus.

The Poultry Cooperative is installing a plant capable of 30 tons of mixed feed an hour, and it can be said that it is the forerunner of industrialized poultry in Spain. Their nutrition practices are known and spread out all over Spain.

There were three aspects that we have to stress: the scientific, the social and the official ones.

Dr. J. L. Krider, vice president of Central Soya Co., Fort Wayne, Ind., delivered the first scientific paper of the week. He explained in great detail what balanced feeding has meant in the development of American poultry and livestock. People were very pleased to listen to inter-

esting statistics of and reasons for progress in U. S. livestock.

Dr. Krider answered lots of questions and when his speech was over the attendants applauded warmly a wonderful introduction to the U. S. contribution to the week. The atmosphere of cooperation between Spaniards and Americans was surprising. Dr. Fred Marti, Dr. Stanley L. Baloun and Dr. Krider were surrounded by people who invited them to see their farms, to discuss management and nutrition problems.

For their part the American technical men were surprised by the progressive farms, the good feeding practices and the level reached in poultry management in the area.

Scientific sessions were combined with social recreation and tourist visits to spots as beautiful as Poblet Monastery and the fishers small village, Cambrils.

Spanish high officials attended the opening and closing sessions. The general director of livestock of the Ministry of Agriculture delivered an encouraging speech at this international meeting. He congratulated the Soybean Council and the Cooperative of Reus on an outstanding job of organizing the week of studies.

The general secretary of the board for livestock improvement attended many sessions and said on several occasions that it is a pity there are not more nonprofit organizations such as the Soybean Council which advises and helps businessmen, farmers and consumers. "These organizations are the right ones to study how goods have to be supplied; they throw light on technical problems and are a real market research organization since they are interested not only in the selling of a certain product but also in its use."

The Chief of the Food and Agriculture Division of I.C.A., Donald S. Hubbel, also attended the meeting representing the U. S. Embassy in Spain and expressed his warmest enthusiasm for this type of meetings from which positive results are sure to come.

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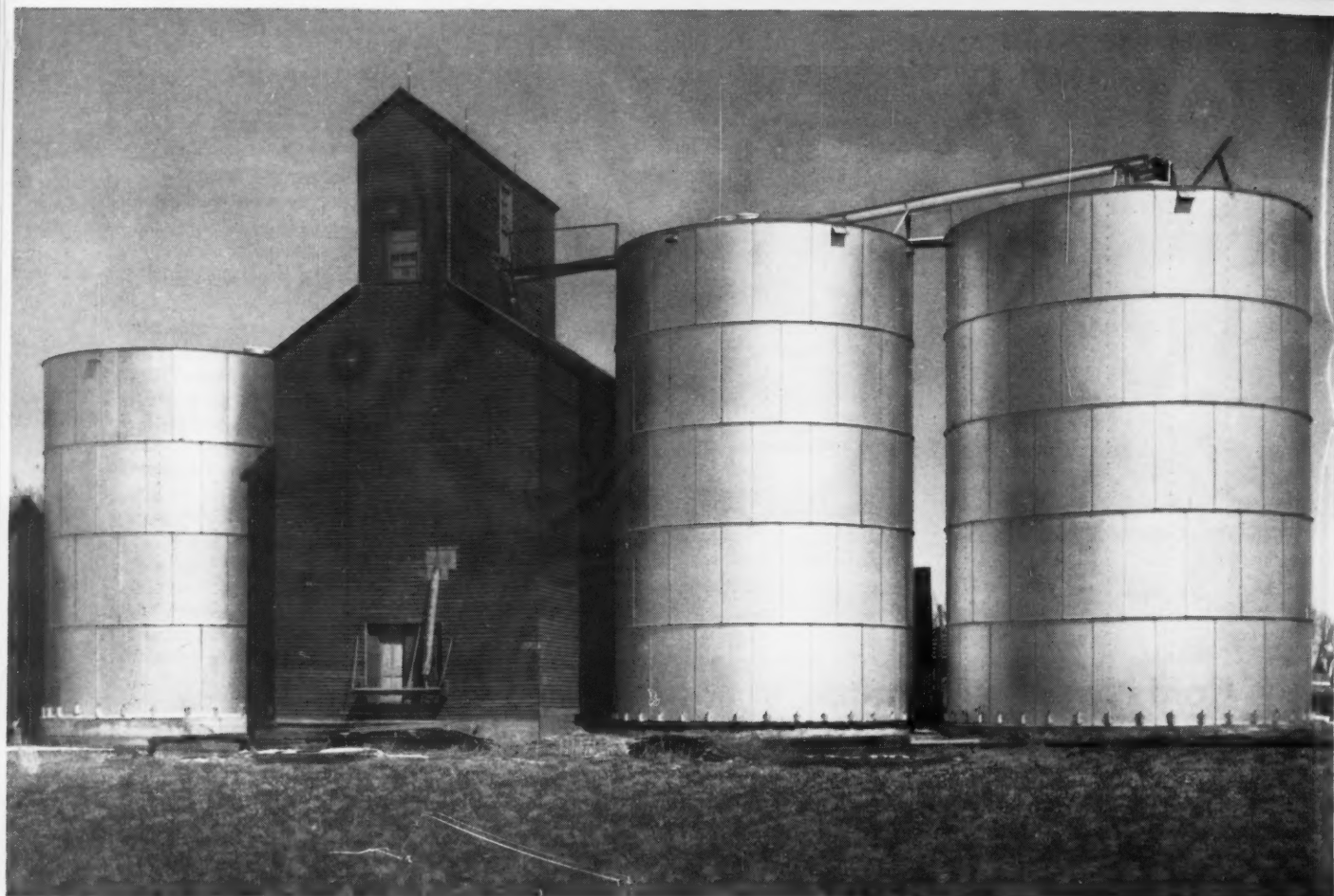


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Butler Bolted Steel Tanks were the first choice twice for fast expansion and steel protection at the Lime Creek Elevator Company, Lime Creek, Minnesota. Tank at left was the first installed by the Roddel-Moreen Steel Company, who also recently added the two Butler tanks at right.



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low insurance rates, minimum maintenance, excellent fire and weather protection, easy cleaning and fumigating. And, of course, Butler's speedy erection.

Butler bolted steel tanks are also widely used for bulk storage of feed and ingredients. Capacities range from 1,297 bushels to 123,364 bushels.

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## JAPANESE-AMERICAN SOYBEAN INSTITUTE

### U. S. Study by Japanese Scientists

By SHIZUKA HAYASHI

Managing Director, Japanese American Soybean Institute, Nikkatsu International Bldg., No. 1, 1-Chome Yurakucho, Chiyoda-Ku, Tokyo, Japan.

TWO JAPANESE scientists are now at the Northern Utilization Research and Development Division of USDA at Peoria, Ill., where they are making a research study of U. S. and other soybeans used for food in Japan.

The two men are:

Kazuo Shibasaki, 41, associate professor at the department of agricultural chemistry, Tohoku University.

Tokuji Watanabe, 41, chief of section of grain processing, Food Research Institute, Japanese Ministry of Agriculture and Forestry.

The two men arrived in Peoria Oct. 18.

They are working under the joint soybean market development project of USDA's Foreign Agricultural Service and Agricultural Research Service, and the American Soybean Association.

Dr. Shibasaki and Mr. Watanabe will attempt to discover the relationship between the physical characteristics of the beans and the requirements for making various Japanese foods. They will study the characteristics of American and foreign soybeans and compare the processing properties of soybeans of various origins used in food manufacturing in Japan with the view of recommending new processing procedures to prepare U. S. soybeans for Japanese food users.

Japanese soybean food processors have complained that U. S. soybeans do not produce food products like miso, tofu, aburage and natto of as satisfactory quality as the products from domestic soybeans. A. K. Smith, head of the protein utilization branch, Northern Utilization Research and Development Division, advocated research to solve the technical problems in connection with the Japanese food production after his survey of the soybean food industry in Japan. The present project resulted.

It is hoped that the project will make it possible to develop modifications in food-making processes, including fermentation so that foods made of U. S. soybeans will become completely acceptable to Japanese users.

The two men will work at the Peoria Laboratory under the supervision of Agricultural Research Service for a minimum of 9 months. Their living expenses during their stay in the United States will be paid by the American Soybean Association. And their traveling expenses from Japan to the United States and back will be paid by the Japanese American Soybean Institute from funds allocated under the market development project.

After completion of their study at Peoria, Dr. Shibasaki and Mr. Watanabe will return to Japan to make their services available to the Japanese soybean industry. They will advise the various food groups on the proper use of U. S. soybeans.

### Dr. Miller Receives Honorary Membership



DR. HARRY W. MILLER receives gold medallion signifying his election as honorary life member of the American Soybean Association at a luncheon in Tokyo. The luncheon was arranged by the Japanese American Soybean Institute and Shizuka Hayashi, managing director (standing), presented the award. Dr. Miller, who is on duty in a Tokyo hospital, was elected honorary life member at ASA's convention in Des Moines last August. Mrs. Miller and Dr. Miller are at the left in picture.

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## CROP REPORT

# Northern Harvest Nears End

THE DEPARTMENT of Agriculture raised its estimate of the 1958 soybean crop again on Oct. 10, for the second straight month.

Total U.S. yield estimated as of Oct. 1 was 572,586,000 bushels, which was 12 million bushels higher than the Sept. 1 report, and 92 million more than the record crop of 1957.

As harvest neared its end in northern areas there were many reports of big yields. But some observers were inclined to question whether USDA's Oct. 1 estimate will not be proved high by final reports.

Favorable harvest weather resulted in a fast windup to the harvest season in most northern areas and the crop was out of the fields before Nov. 1 most places.

Combining was under way in Southern States.

Reports of good quality of the crop were general. Moisture content generally dropped as harvest proceeded and it appeared that the crop would store well.

It appeared that a record part of the crop was being held off the market and stored.

Foreign material content was reported low in spite of some heavy weed infestations.

Reports by our correspondents:

**Illinois.** Russell S. Davis, Clayton, Ill. I think this the best soybean crop this area has had for some years. Stands were good, no more weeds than usual, quality excellent, and yields of 25 to 35 bushels are

common. Not many of the 20-bushel kind. Storage has ceased to be a problem here. In fact, one large local processor has sold one of his outlying storage units recently. This has been a banner year for Clark variety. Its yields have been so far above Hawkeye and Harosoy that growers are asking for seed of it for next year.

**Indiana.** Ersel Walley, Walley Agricultural Service, Fort Wayne: Never before such a favorable season for ripening and harvest. Yields less than anticipated in 80% of cases, as good or better in 20%.

J. E. Johnson, Champaign: Harvest completed, has been long drawn out affair. Quality of the crop never better. Many local elevators report the "cleanest" beans they have ever taken in. While the weed situation was more serious than some other years, better harvesting equipment met this situation in very satisfactory manner. Yields range from 12 to some 50 bushels. Always take these extremely high yields with two grains of salt. Continued reports of more soybeans stored on farms than any previous years. Less of the crop was sold than in any previous year.

**Kansas.** B. E. Henline, Soy-Rich Products, Inc., Wichita: Yields 25 to 35 bushels are average with quite a few exceeding 40 bushels per acre. Best quality soybeans grown since 1951. We believe less than 5% will take loan on farm-stored soybeans.

Bruce Behymer, Wichita, Kans., Eagle: The most recent estimate foretells a total of 7,238,000 bushels (for Kansas) against the previous record of 6,851,000 bushels in 1952. Probably the most remarkable occurrence is that the 1958 crop is being grown on 330,000 acres against a total of 644,000 acres in 1952—an increase of 400,000 bushels on one-half of the planted and harvested acreage of 6 years ago.

**Kentucky.** Crop Reporting Service: Harvest of a record breaking soybean crop is now heading into the home stretch. Farmers are taking full advantage of the favorable weather to prevent a recurrence of their experiences of a year ago when many fields were still out during heavy fall rains. Elevators report some difficulty in finding enough storage capacity to handle the rapid harvest of a bumper crop.

**Missouri.** J. Ross Fleetwood, University of Missouri, Columbia: We have nearly completed harvesting our biggest crop in terms of acreage and yield. A cool, wet, somewhat late season has been climaxed with unusually good harvesting weather. All in all a great soybean year in Missouri.

**Ohio.** Lewis Brewster, General Mills, Inc., Rossford: All indications so far are that the per acre and total yield will both be higher than 1957. There were plenty of troubles with weeds. The grower apparently put his mind to the task and did a wonderful job in cleaning up the weediest crop I have ever seen.

**South Carolina.** Crop Reporting Service: Condition of the soybean crop is well below a month ago as relatively dry soils during September set the crop back. Many fields are late and prospects are poor for most late beans. The crop is quite spotty and yield prospects range from poor to excellent.

**South Dakota.** Crop Reporting Service: Moisture content of many soybeans is too low for good combining. This causes a large number of the beans to be lost from shattering and many become cracked during combining.

SOYBEANS FOR BEANS (OCTOBER 1958)  
CROP REPORTING BOARD, AMS, USDA

State	Yield per acre Indicated		Production Indicated	
	1957	1958	1957	1958
	Bushels	Bushels	1,000 Bushels	1,000 Bushels
N. Y. ....	18.0	17.0	108	85
N. J. ....	14.0	23.0	616	989
Pa. ....	13.0	22.0	221	352
Ohio ....	23.0	25.0	32,683	36,675
Ind. ....	24.5	27.0	52,994	61,830
Ill. ....	25.5	28.5	126,837	147,772
Mich. ....	22.0	24.0	5,192	6,600
Wis. ....	17.0	16.0	1,717	1,904
Minn. ....	21.5	18.0	54,804	55,368
Iowa ....	26.0	27.5	72,592	83,545
Mo. ....	21.5	24.0	35,196	47,400
N. Dak. ....	18.5	15.0	3,404	3,975
S. Dak. ....	16.5	12.0	3,069	3,036
Nebr. ....	27.0	30.0	3,699	5,820
Kans. ....	11.5	22.0	2,461	7,238
Del. ....	17.5	24.0	2,572	3,888
Md. ....	18.5	23.0	3,496	4,324
Va. ....	20.0	22.0	4,960	5,918
N. C. ....	21.0	22.0	8,736	9,064
S. C. ....	15.5	16.5	5,100	5,858
Ga. ....	14.0	13.0	1,400	1,430
Fla. ....	23.0	24.0	1,035	1,104
Ky. ....	20.5	23.0	2,665	3,220
Tenn. ....	22.5	25.0	4,208	5,825
Ala. ....	20.0	21.0	2,440	2,688
Miss. ....	19.0	21.0	11,685	15,498
Ark. ....	23.5	25.0	32,500	46,625
La. ....	21.0	22.0	2,499	2,640
Okl. ....	17.0	23.5	510	987
Texas ....	26.0	32.0	442	928
U. S. ....	23.1	24.5	479,841	572,586



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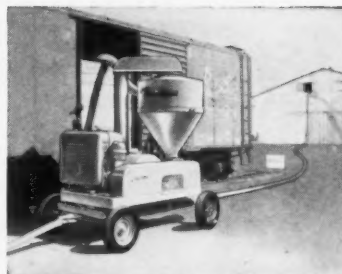
Yes... it's true! Here is the latest up-to-date method of conveying and cleaning grain at a big savings to you! With only one man operating the Grainvayor, you can load a car of corn in less than one half the time it would take a crew of men doing it the old fashioned way. PLUS... Grainvayor cleans the grain of rodent pellets, live insects, weevil-cut grain, and musty odors... all in the same, fast operation! It means loading and cleaning a bushel of corn for only a fraction of a cent. Think of the savings... in time and money!

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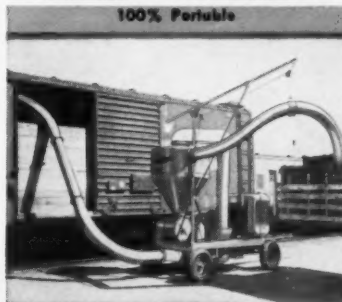
Loading corn is only one of Grainvayor's dollar-saving operations! Regardless of your grain handling problem... Grainvayor is equipped to do the job—oats from trucks to round bins... wheat from grain cars to flat storage... soybeans from flat storage to box cars... plus many others. And... you can depend on Grainvayor's guaranteed pneumatic conveying system for dependable, long-lasting service.

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## PUBLICATIONS

### See 50% More Iowa Acres by 1970

IOWA SOYBEAN production is expected to increase one-half by 1970 as compared with 1957, according to the Chicago & North Western Railway Co. Iowa's 1957 crop totaled 72.6 million bushels, and the North Western estimated the 1970 crop at 108 million bushels.

The Railway has issued a brochure dealing with soybeans in its territory—which includes Iowa, Illinois, Minnesota, South Dakota and Wisconsin. In addition to forecasts of future production, adapted varieties, culture, harvesting, processing methods and markets are included.

The Railway expects soybean production to increase in all North-western States, but the increase will be large only in Minnesota and Iowa. By 1970 the Minnesota crop is expected to reach 75 million bushels compared with 54.8 million bushels in 1957.

Illinois is expected to retain its rank as the No. 1 soybean produc-

ing state, but future increases are not expected to be large due to the fact that concentration is already heavy.

Soybean production is expected to increase in both Nebraska and South Dakota but not to become a primary crop. Production, particularly in South Dakota, is greatly limited by rainfall.

Wisconsin is expected to continue to be a major market for meal but not a large soybean producing state.

*Soybeans, an Industrial Crop in Chicago and North Western Territory.* Chicago & North Western Railway Co., 400 West Madison St., Chicago 6, Ill.

### Rapid Growth of Soybean Production in Minnesota

AN OUTSTANDING example of Minnesota's dynamic agriculture is the rapid growth of soybean production since the early 1940's, when Minnesota farmers began to harvest

soybeans for beans rather than hay.

Production first exceeded 1 million bushels in 1941. At the end of 5 years it had increased tenfold to over 10 million bushels. It passed the 20-million-bushel mark in 1952 and then doubled again in 2 years to total 42 million in 1954. The expansion continued in the following 3 years, and in 1957 production totalled nearly 55 million bushels, a record high. Production in 1958 was estimated at 58.4 million bushels as of Sept. 1.

First introduced for hay in the southeastern part of the state, the acreage increased rapidly in the south central portion as other uses became more important.

In recent years, soybean acreage expansion has been more pronounced in counties paralleling the Minnesota River. The introduction of earlier maturing varieties has made soybeans a major crop in west central Minnesota, and has brought a sharp expansion in the Red River Valley as far north as Polk County.

*Minnesota Agriculture — Crops 1858-1958.* By Richard J. Schrimper. State-Federal Crop and Livestock Reporting Service. 531 State Office Bldg., St. Paul 1, Minn.

### Raising Standard of Living Asiatic Goal

RAISING the standard of living of the people is the principal longtime goal of the program of every country of South Asia, including India, Pakistan, Afghanistan, Ceylon and Nepal.

The agricultural expansion plans of these countries call for increased production of oilseeds and other commodities in which U. S. agriculture has a vital export interest. This could mean more competition in world markets for U. S. farm products.

However, rapidly growing populations, the need to improve present low living standards, industrial expansion requiring more agricultural raw materials, and numerous other factors make it appear that the United States will face only limited additional competition from South Asia in the sale of farm products abroad.

Also, there will be little if any decline in South Asia's need for agricultural imports.

*Agricultural Developments in South Asia—Their Effects on U. S. Farm Exports.* By Clarence E. Pike. Foreign Agriculture Report No. 100.

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**Model "R" Hytrol**

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- Sizes—10 to 22 ft.



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Foreign Agriculture Service, U. S. Department of Agriculture, Washington 25, D. C.

### **Iowa Had 21 Counties With Million Bushels**

WITH A 75-million-bushel soybean crop for the first time in 1957 Iowa had 21 counties that produced 1 million or more bushels.

Of these, there were two 2-million-bushel counties, Pocahontas and Calhoun; and two 3-million-bushel counties, Webster and Kossuth. Webster was the top soybean producing county in the state in 1957, leading Kossuth by 130,000 bushels.

Heaviest production was concentrated in the central district with 15.2 million bushels, the northwest with 13.5 million bushels, and north central with 12.7 million bushels.

Lightest soybean production in 1957 was in the northeast, the east central and the southwest districts, each with less than 3 million bushels.

*Iowa Assessors Annual Farm Census 1957.* Iowa Crop and Livestock Reporting Service, Room 506, Iowa Bldg., Des Moines, Iowa.

### **Miscellaneous**

*The Grasshopper as a Vector of Tobacco Ringspot Virus in Soybean.* By John M. Dunleavy. *Phytopathology*, November 1957, Vol. 47, No. 11, pages 681-682.

*Marketing Mellorine in Seven Trade Areas.* By Louis F. Herrmann. *Agricultural Marketing*, September 1958. U. S. Department of Agriculture, Washington 25, D. C.

*Changes in Castorbeans During Five Years of Storage.* Marketing Research Report No. 264. Marketing Research Division, Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.

*Changes in the Composition of Soybeans on Sprouting.* By L. L. McKinney, F. B. Weakley, R. E. Campbell and J. C. Cowan. *Journal of the American Oil Chemists' Society*, July 1958. 35 E. Wacker Drive, Chicago 1, Ill.

*Correcting Manganese Deficiency Can Double Soybean Yield.* By D. J. Hoff and H. J. Mederski. *Ohio Farm and Home Research*, May-June 1958. Ohio Agricultural Experiment Station, Wooster, Ohio.

*Japan Buys American in All 48 States.* An export commodity survey to show how every state profits from trade with Japan. United States-Japan Trade Council, 1000 Connecticut Ave., Washington 6, D. C.

## *If Railroads did not exist—the U.S. would have to invent them!*

*From a recent editorial in the Canton (Ohio) REPOSITORY*

**S**UPPOSE that everybody in the United States were to learn for the first time about a marvelous method of transportation called a railroad.

The idea would be sensational.

High-speed tractors running on steel rails laid on privately-owned rights-of-way, with minimum curves and grades, would be capable of pulling long processions of trailers full of merchandise. Imagine!

Trains of trailers would be kept rolling day in and day out until they reached their destinations. They would be shuttled into and out of vast marshaling yards, where the trailers would be grouped in the right combinations. Of all things!

Everything connected with the procedure, moreover, would be subject to taxation. It would be expected to pay for itself. What a switch that would be!

The high-speed tractors on their twin ribbons of steel could even haul human beings, in addition to freight. If necessary, the human beings could be bedded down and hauled from one place to another in special cars with comfortable seats and all the comforts of home.

It would be an absolutely revolutionary idea—railroading. Provided it had just been invented, that is.

All the progressives and the folks who try to lend a helping hand to get new ideas off the ground would be 100 per cent for it.

All the politicians and administrators would be 100 per cent for it.

As for the militarists and hard-headed security planners, they would be 150 per cent for it, because it would represent a mode of transportation more dependable for long-haul movement of heavy cargo than anything ever dreamed of heretofore.

The whole country would welcome the useful stranger with open arms and be alert for opportunities to give it a boost.

Cities and counties would tumble over one another to build things for it and to make free land available for its terminals.

Politicians would get into higher mathematics to subsidize it with financial gimmicks.

Nothing would be too good for the railroads if the idea of transporting things on steel rails were brand new. . . .

All railroads want is a chance to be as good as they know how to be if they are unshackled—set free from regulations that were designed to curb them when they were new and threatening to abuse a monopoly in high-speed, straight-line transportation.

Railroads should be born again.

That is what would have to happen if they went out of existence.

If they did not exist, the United States would have to invent them. . . .

*Association of American Railroads*

WASHINGTON, D. C.

## NEW PRODUCTS and SERVICES

**CROP DRIER.** Two totally new units in the crop drying field are being marketed by Aerovent Fan & Equipment Co. One, called the "Aero-Wagon" system, employs an up-draft of hot air distributed evenly through breather holes in a wagon bottom. The second, dubbed the "Aero-Trol" (shown here), is a light-weight, portable gas-fired supplemental heater.

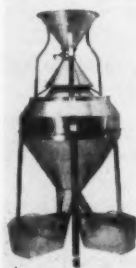
With the "Aero-Wagon" system, the farmer harvests his crop, dries it and hauls it to storage—all in the same wagon. The "Aero-Trol" supplemental heater has up to 250,000 b.t.u. output per hour, and is designed to supply warm air to any fan where additional heat is needed to boost natural air drying.

For further information write Soybean Digest 11b, Hudson, Iowa.

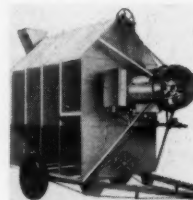
**SAMPLERS.** Boerner samplers manufactured by the Suttle Equipment Corp. now contain improved pockets that are double the thickness of previous models. This greatly increases the wear of these units.

The sampler meets all government specifications and is hand-assembled by craftsmen using only the finest rust-resistant brass and copper.

For further information write Soybean Digest 11c, Hudson, Iowa.



**GRAIN DRIER.** The American automatic grain drier model 1807A for farm operation is announced by American Farm Equipment Co. It is priced at less than half American's lowest price unit of last season.



The new unit has 70% of the capacity of former driers and has the lowest operating cost per dollar invested, the manufacturer states. It takes about 40% of the electric power to operate (needing only a 2 hp motor) and about 40% of the fuel. It is equipped with complete automatic safety controls.

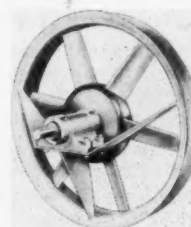
For more complete information write Soybean Digest 11d, Hudson, Iowa.

**CROP DRYING.** A new axial airfoil fan, designed for operation with whatever power is available, has been developed for crop drying and other applications by Chicago Blower Corp.

The new fan is suitable for V-belt or flat belt pulley drive and can be installed any place where diesel, gasoline, stream or electric power is available.

Wheels range in diameter from 24 to 48 inches.

For further information write Soybean Digest 11a, Hudson, Iowa.



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Columbian Bolted Steel tanks are tight, fireproof and vermin proof, impervious to wind and weather. They are erected fast and economically—and matching capacity for future growth can easily be added at any time.

Columbian engineers will be glad to consult with you on your own elevator problem—and give a "Look Ahead" plan for increasing the dollar capacity of your elevator operations. Write today for a free copy of the Columbian Grain Tank catalog.

## COLUMBIAN STEEL TANK COMPANY

P.O. Box 4048-U

Kansas City, Mo.



Associate Member, Grain & Feed Dealers National Association  
—Member, American Dehydrators Association.

**STEEL, Master-crafted by Columbian... First for Lasting Strength**

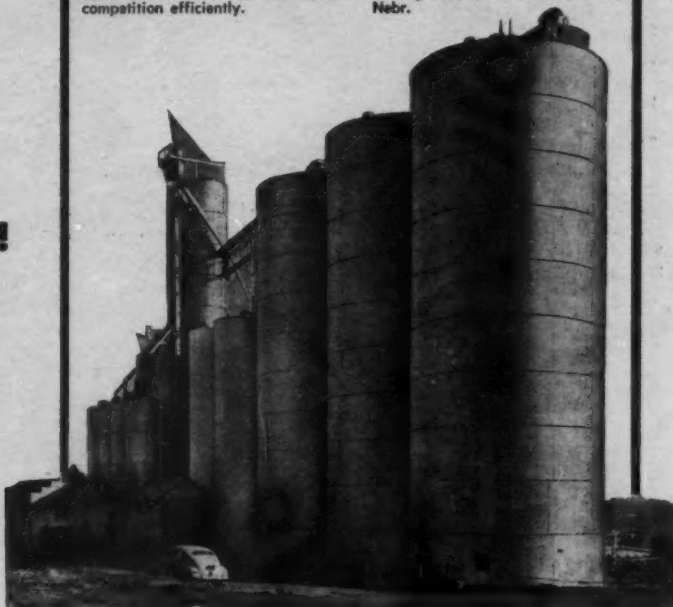
NOVEMBER, 1958



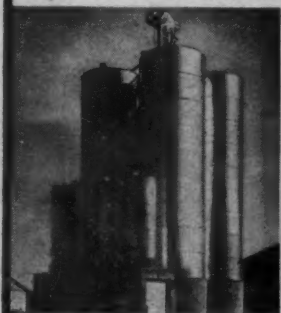
Modern Columbian blending and classifying tanks and a new headhouse, added to a part-new, part-old elevator at Oberlin, Kans., enable Center Grain Co. to meet competition efficiently.



Columbian look ahead planning and bolted steel tanks provided this completely modern 115,000 bu. "all gravity" elevator for Burlington Elevator Co. at Hebron, Nebr.



This 250,000 bu. Lafayette Mill & Elevator at Lexington, Mo., started as a modern 75,000 bu. plant designed with Columbian "look-ahead" engineering in 1946. The extra "dollar capacity" of that efficient original installation created enough business to require and permit expansion to its present size within ten years.



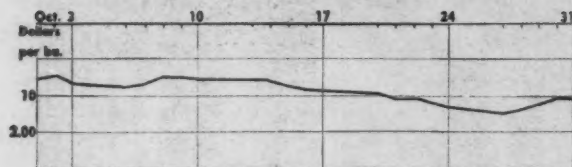
Economical Columbian Blending and classifying tanks over a drive-through means fast, efficient grain handling for McKenna Grain Co., Kingman, Kans. Note elimination of headhouse, for economy. Capacity is 90,000 bu., handled at rate of 5,000 bu. an hour.



Columbian Modernization provided so much extra "dollar capacity" for Riverdale Grain Company's 64,000 bushel elevator that a 67% expansion of bushel capacity became necessary within one year. New Bolted Steel tanks for 43,000 bu. were added.



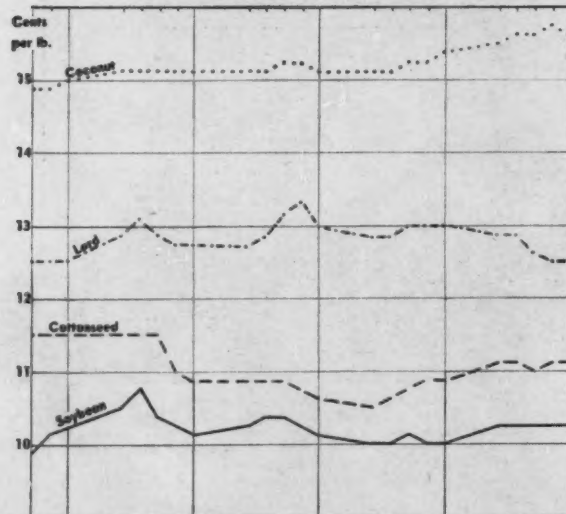
### DAILY MARKET PRICES No. 1 Cash Soybeans, Chicago



### Bulk Soybean Oil Meal, Decatur



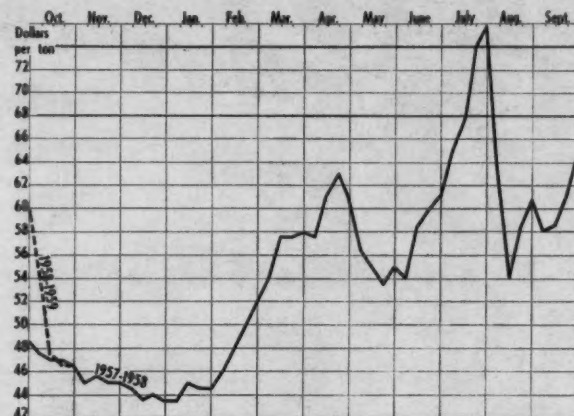
### Crude Vegetable Oils and Lard



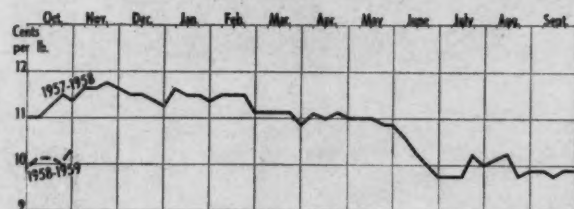
### TRENDS AT A GLANCE (Weekly Close) No. 1 Cash Soybeans, Chicago



### Bulk Soybean Oil Meal, Decatur



### Crude Soybean Oil, Tankcars



### 1957 AND 1958 SOYBEAN CROPS

	1958-59	1957-58
Total new crop soybeans under support Sept. 30 .....	144,000 bu.	0 bu.
Total soybeans inspected for overseas shipment and lake shipments to Canada Oct. 1-Oct. 24	8,740,535 bu.	7,787,651 bu.

## October Markets

OCTOBER was characterized by a sharp drop in meal prices to the level of a year ago and a weakening in cash beans at the tail end of harvest. Soybean oil held about level for the month. Factors included:

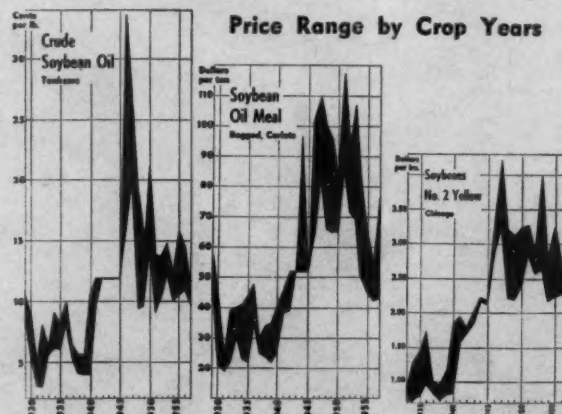
An early end, in the north, to harvest of a record crop which the Department of Agriculture as of Oct. 1 placed at more than 90 million bushels above a year ago.

Heavy storage of new crop beans by farmers—up to 90% in some areas—and general belief that impoundings will be heavy under the loan. But processors bid up to keep beans out of the loan and apparently were able to obtain needed supplies.

Uncertainty over the export picture.

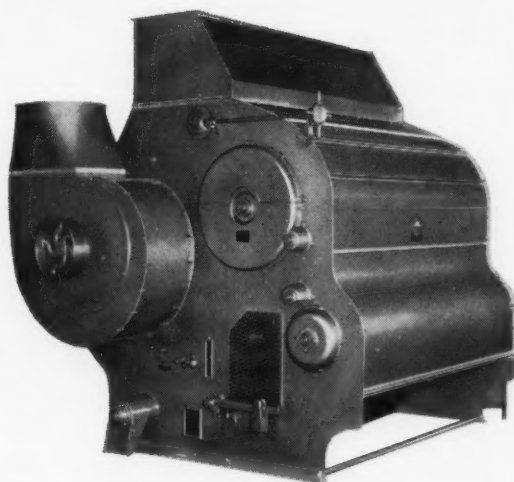
**BYPRODUCTS.** The price of soybean fatty acids remained at 15½¢ per pound during October. Acid soybean stock delivered Midwest dropped from 4½¢ to 4¢. Raw soybean soap stock remained at 1½¢ per pound.

### Price Range by Crop Years





## Two All-Star Performers for ROUGH SCALPING and ASPIRATING SOYBEANS and GRAINS

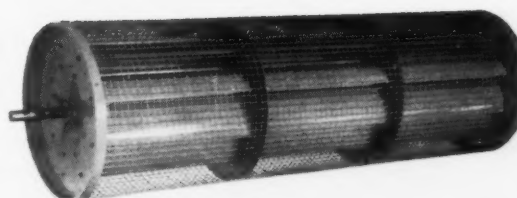
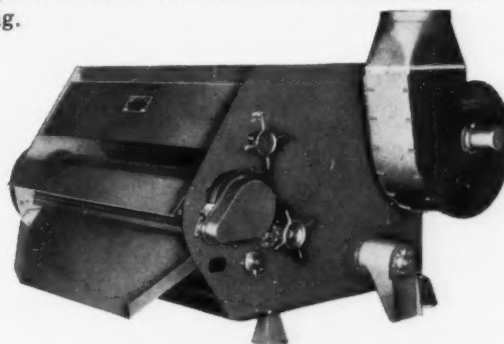


### 24" x 76" CARTER SCALPERATOR

On soybeans going directly to storage the Carter Scalperator does a good job of both rough scalping and aspirating. It removes both coarse and light foreign materials. The Scalperator also is used on beans or grains when they're turned for cooling. Note that this machine can be used on other grains without change of equipment. The 24" x 76" Scalperator is 84" wide, 117" long, and 96" high. The 24" x 60" size of this model is 101" long.

### 11" x 60" CARTER SCALPERATOR

The 11" x 60" Scalperator is ideal for smaller runs. The 11" x 60" is 79" wide, 89" long, and 48" high... fits neatly into work space. The 11" x 42" size of this model is 71" long. All Scalperators are rotary in motion, thus operate without vibration.



**SIMON-CARTER CO.**

689 Nineteenth Ave. N. E. • Minneapolis 18, Minn.  
Successor to Hart-Carter Co., Minneapolis Division

THE BASIC UNIT—Carter "Squirrel Cage" Scalping Reel. Baffle plate construction retards flow of beans through the reel, insuring thorough rough scalping. The reel is self-cleaning.

# The CARTER SCALPERATOR

## GRITS and FLAKES . . . from the World of Soy

### Announce Opening of Eastern States Terminal

The opening of **Eastern States Petroleum & Chemical Corp.**'s eighth terminal was announced by E. A. Doersten, manager of divisions.

The new terminal is located in Savannah, Ga. Other terminals are located in Chicago; East Liverpool, Ohio; Madison, Ind.; Brownsville, Tex.; Carteret, N. J.; and Los Angeles.

In an expansion program started over 2 years ago, the firm's plan has been to open terminals in strategic locations to give better service to customers in these areas.

Custom designed barges and other specialized shipping facilities are used exclusively for solvent delivery to the various terminals. This type of careful handling insures cleanliness and purity of product.

### Spencer Kellogg Buys Staley Milling Co.

**Spencer Kellogg & Sons, Inc.**, Buffalo, N. Y., processor, has purchased the assets of **Staley Milling Co.**, Kansas City, Mo., effective Oct. 31.

Staley is one of the largest independent feed manufacturers in the Midwest. The acquisition will thus put Spencer Kellogg, one of the leading soybean processors, in the position of being an important factor in the feed manufacturing and distribution business in the Midwest.

Spencer Kellogg entered the feed business first in June 1957, through

the acquisition of **Beacon Milling Co.**, Cayuga, N. Y.

Howard Kellogg, Jr., president of SK, announced that Staley will continue to operate under its present management, but that it will have the benefit of the capital resources of Spencer Kellogg, "which will permit expansion under a long-range planning program."

Kellogg said about 40% of SK's end products, including soybean and linseed meals, is used by feed manufacturers.

### Kennedy Elected to New General Mills Post

G. S. Kennedy, Minneapolis, a veteran of 44 years with **General Mills**, has been elected to the newly created position of executive vice president.

And E. O. Boyer, San Francisco, has been appointed vice president and administrator of the flour, feed and oilseed operations. These duties were relinquished by Mr. Kennedy in accepting his new assignment.



Robert M. Hamilton

Both men have previously been vice presidents and directors.

Robert M. Hamilton has been named manager of protein sales for the oilseeds division of General Mills.

Announcement of Hamilton's appointment was made by Fred H.

Hafner, director of protein operations for the division.

For the past 6 years, Hamilton has done special development work in connection with wheat starches, proteins, and amino acids at the company's central research laboratories. Before joining General Mills he was associated with the Clinton Corn Processing Co.

### Fred Thomas Is S-K Exec. Vice President

**Spencer Kellogg & Sons, Inc.**, Buffalo, N. Y., announces the election of Fred W. Thomas to the position of executive vice president.

Mr. Thomas has long been associated with the soya processing and feed industries. He was formerly president of **Central Soya Co., Inc.**, and has served in several capacities in the Larowe division of General Mills. He was chairman of the board of American Feed Manufacturers Association in



Fred W. Thomas

1948 and 1949.

"With expansion and diversification initiated last year by our merger with the **Beacon Milling Co.**, Mr. Thomas will bring to our company a wealth of experience in fields where such activities are mainly centered," said Howard Kellogg, Jr., president, in announcing the appointment.

### Chase Bag Co. Board Chairman Has Gone

Elliott K. Ludington, 82, a leading figure in the packaging business and chairman of the board of directors of **Chase Bag Co.**, died of a heart attack in New York Oct. 8.

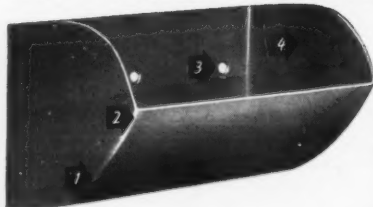
During his term as president from 1910 to 1934, Mr. Ludington was responsible for expansion of the Chase Bag Co. from a two-plant organization to a nationwide network of 13 factories and a paper mill.

As chairman of the board he continued his keen interest in all company affairs, particularly in the development of new products.



Elliott K. Ludington

## First Choice Wherever Grain is Handled



Your jobber has them, or write **B. I. Weller Company**, 327 South LaSalle Street, Chicago 4, Illinois.

**CALUMET CUPS**

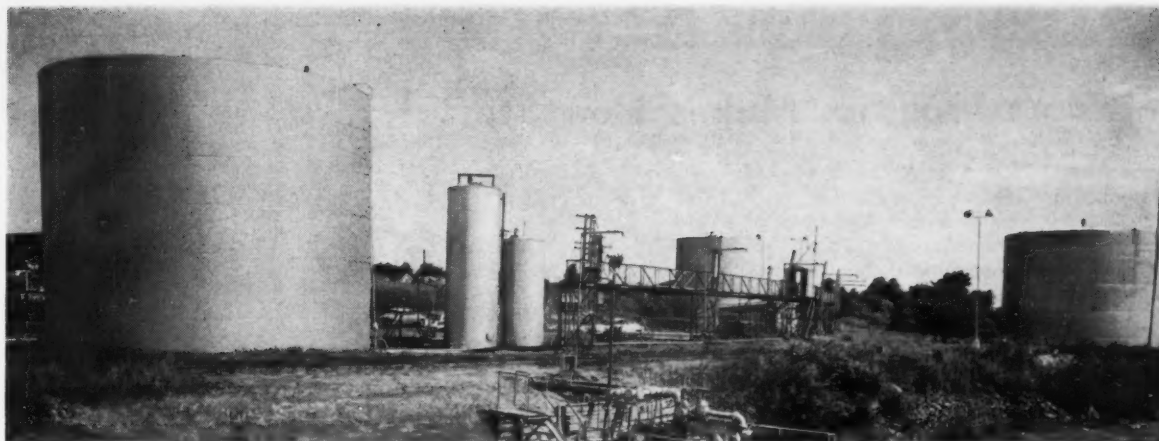
(1) The logarithmic curve design loads easier . . . dumps cleaner . . . permits high speeds.

(2) Scientifically formed lip aids in greater cup capacity.

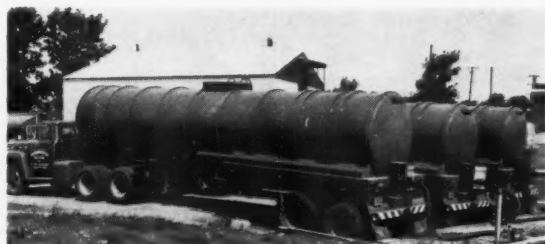
(3) Bolt-hole placement gives better cup balance . . . saves bolting.

(4) Hyperbolic sideboard ends permit greater load capacity without "slopping."

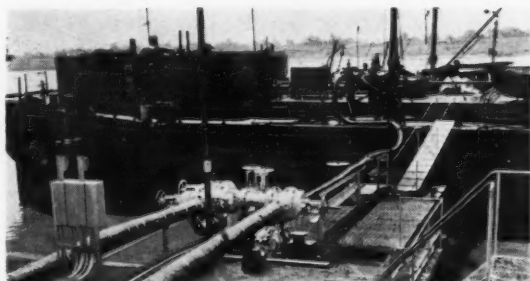




Storage capacity totals more than 14 million pounds. Controlled heat enables us to move products through the tanks in cold weather.



Three tankwagons can be unloaded simultaneously.



Three barges are loaded and moved monthly.

## SOYBEAN OIL

Movement from Midwest Points  
to New York Harbor

## STORAGE

Twenty 47,000-lb.-capacity tank-trucks pick up soybean oil from Illinois, Indiana and Ohio points for delivery to Toledo.

Three 2,500-ton-capacity barges moved monthly from Toledo to New York harbor during the open season.

# Metropolitan Fats and Oils, Inc.

Foot of East 22nd Street

Bayonne, N. J.

Toledo, Ohio Division

Foot of Congress Street

Phone Cherry 2-6253

## WASHINGTON DIGEST

### Export Program Makes Slow Start

THE DEPARTMENT of Agriculture programs intended to move fats and oils into use this year are slow in getting off the ground thus far. Substantial price support activity for oilseed crops is likely.

The USDA plan for putting into effect the authority granted by Congress last summer to make edible oils available for donation programs at home and abroad has suffered a temporary setback. This program has been set aside at the White House level, at least for the time being, because of the necessity for "spartan budget economy."

This is budget-making time and everybody is budget conscious now. The Department of Agriculture budget estimate has been increased by approximately \$2 billion for the current fiscal year—to a total of \$6.9 billion.

The current decision is to put off the oils donation program and fall back on what is hoped to be a big Public Law 480 export program. However, there is considerable feeling here that the donation plan will come back into the news later on.

Congress, which authorized the

plan, is pretty apt to put pressure on USDA to move more oils in this year of record crops and record oil supplies in sight. Congressman Gathings of Arkansas, a ranking member of the House Agriculture Committee, has written to Secretary of Agriculture Benson to ask about his plans for moving oilseed crops this year.

Congressman Gathings is interested not only in the donation program but in the authority also authorized by the last Congress to use soybeans in the barter program.

USDA had worked up an oils donation program, with the intent of moving as a starter in the neighborhood of 250 million pounds of oil. Donations would have been made both at home and overseas through approved agencies such as CARE and church groups.

The cutoff of the donation program sets the movement of oils back as the new season is just getting well under way. The P. L. 480 program is just getting started. Officials hesitate to say how large the 480 oils program will be this year. There is a possibility it may fall short of the volume for the year just closed,



By PORTER M. HEDGE  
Washington Correspondent for  
The Soybean Digest

unless the world situation turns out to be different than it appears to be now.

Exports for the year ending Oct. 1 will fall some short of the goal set a year ago and held to throughout the marketing year—1.1 billion pounds. But the short fall apparently won't be large, and will be due to the fact September bookings were thrown into October as much as anything else. The estimate now is that exports for last season will run close to 1,050 million pounds of edible oils.

There is some question in USDA at this stage that comparable exports will run as high in the current season, despite the bigger crop. The tentative size-up is that the P. L. 480 program will have a little tougher going this season than last, primarily because of larger world oil supplies.

This is a tentative estimate. It has to be tempered by accuracy of the information now available. It also has to be qualified by whatever actions may be taken later, should the Administration decide to implement present export measures with others available. Congress also will be a factor when it gets back next winter.

#### World Production

World soybean production is forecast at a new high for the fifth consecutive year. The estimate of 984 million bushels represents a 12% increase above last year's high. It is 44% above the 1950-54 average.

The increase over last year—108 million bushels—is due mainly to the big step-up in U. S. production. However, China's production is said officially to be up by around 15 million bushels this year over last—a total of about 350 million bushels. There is no way to check this yet, but it's believed here that the

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work. Calculates per-  
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of 250 to 500 grams.  
Fast and foolproof.  
Only one of its kind.

Accepted by farmers  
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Chinese may have enough beans this season to cut into U. S. export markets some.

Foreign Agricultural Service estimates a record world cottonseed production this year. There apparently is a big increase in output of peanuts. Size of the Mediterranean olive oil crop is still not known, but there is an official estimate of around 1.2 million short tons. This is about the same as the estimate for the current year. Carryover stocks are expected to be at least 100,000 short tons above last year.

Spain, which has been taking a large volume of U. S. oil, is expecting an above average olive crop this year. Outside of Spain, European countries are in their off-year yield cycle. Weather has been bad in Italy and Portugal. However, olive crop estimates at this date are highly tentative. The crop is still subject to insect and weather hazards.

### Cottonseed Support

Commodity Credit Corp. has offered to take cottonseed under its price support program this year in three states in which prices have gone below price support level. These are Texas, New Mexico and Oklahoma.

The support plan for cottonseed has been worked out so CCC will take oil, and allow the crop to be handled normally.

Cottonseed will be offered to crushers on competitive bid. The crushers will pay support price for the seed, keep all products except oil, and submit a bid on the price they will sell the oil to CCC. Effect of this arrangement is to have the seed crushed normally, and the oil held for CCC. In some cases seed may be stored for disposition later. Oil taken over by CCC could be used for school lunch, donation, or barter programs.

Officials don't know how much oil they may take this season. The feeling in late October is that CCC may get more oil than had been expected.

### Loan Program

A whopping big soybean loan program totalling more than 125 million bushels is anticipated by USDA officials this season.

Well over 100 million bushels will go under loan, it has been estimated, with 20 million bushels or more under purchase agreement.

The soybean supply this year (based on October crop report and stocks figures) totals 593,669,000 bushels. This is 103½ million bushels above last season, a 21% increase.

Prices are figured to move below

support of \$2.09 during the harvesting season, but to pull back up close to the loan level later. Prices are not expected to move ahead of the loan rate at any time during the marketing year, unless the situation changes greatly.

Total use of soybeans will hit another new high this year, officials estimate, but carryover stocks a year from now will soar unless additional measures to move beans are taken. The current (and still tentative) estimate of bean carryover in 1959 runs above 100 million bushels, with CCC holding from half to two-thirds of the total.

Soybean oil prices are estimated to be lower this year than last, because supplies of other competing oils are up as well as the soybean supply. The outlook for soybean meal is a little better than a year ago, officials say. An increase in animal units will boost demand for meal.

## Japanese Soybean Production Declines

JAPAN'S 1958 soybean crop will total 436,830 metric tons (16 million bushels), according to the Sept. 1 estimate of the Japanese Agriculture-Forestry Ministry. This is a decline of 21,650 metric tons or 800,000 bushels from last year.

Japanese soybean acreage has been decreasing since the peak year of 1945, the report states.

## Represents Fort Worth

Dabney-Hoover Supply Co., Memphis, Tenn., now represent the Fort Worth Steel & Machinery Co. in its complete line including screw conveyor and component parts, V-belts, sheaves and sprockets. Lee Dabney and Winston Hoover are partners, and have been in business since 1946.

## - MARKET STREET -

We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here. Rate 10c per word per issue. Minimum insertion \$2.00.

**FOR SALE — FISCHBEIN PORT-**able bag closers in stock for immediate shipment. Write for circular and prices. Douglas L. Mains Co., 1034 College Ave., Wheaton, Ill. Phone Wheaton 8-7474.

**STEEL GRAIN BINS—SOME 3,300, 4,400, 6,000, 7,000, 8,000 and 9,000-**bushel capacities available at attractive prices. Midwest Steel Products Co., 121B Railway Exchange Bldg., Kansas City 6, Mo.

**WANTED: FLAKING AND CRACK-**ing rolls, meal coolers and driers and roller mills. Soybean Digest, Box 319-J, Hudson, Iowa.

**SEND FOR FREE INFO ON OUR** remarkable advances in the forecasting of grain futures price trends. Commetrics Institute, 14944 Rhinestone Dr., Sherman Oaks, Calif.

**STEINLITES—COMPLETELY RE-**built at Fred Stein Laboratories, Atchison, Kans., who are the manufacturers. Seedburo rebuilt Steinlites carry full year guarantee. Write for details. Dept SD, Seedburo Equipment Co., 618 W. Jackson Blvd., Chicago 6, Ill.

**PNEUMATIC "AIR-CONVEYOR"** systems—stationary units or bulk truck, new or used. Any size, capacity, distance or product. Nolder Co., Box 14, Corona Del Mar, Calif.

**ENGINEER WANTED — TO JOIN** group of consulting and design engineers. Exceptionally good opportunity for engineer with substantial experience in design and operation of solvent extraction and oil processing plants. Write or phone Engineering Management, Inc., 1225 Board of Trade Bldg., Chicago 4, Ill. WABash 2-2736.

**FOR SALE—ANDERSON Expellers** and French screw-presses, cookers, driers, 5-high, 48-inch crushing rolls, 36-inch attrition mills, sewing machines, hammermills, cracking rolls, filter presses. Ray L. Jones, 1923 Hayselton Drive, Jefferson City, Mo.

**HIGH QUALITY CERTIFIED AND** registered seed of all the recent releases of the University of Minnesota. To help us on storage we give liberal discounts for early orders. Newest varieties including Minhafer oats, Forrest barley, Army flax, Comet soybeans, etc. Eldred Buer & Sons, Box 55, Canby, Minn.

**COME AND SEE FOR YOURSELF** the new Roe Wonder Bean growing in the field and being combined. One plant has produced as high as a thousand pods. One bushel plants as high as 5 acres. Seed for sale from combine, bin or sack. Creamer Seed Farm, Junction Route 4 and 36, southwest of Springfield, Ill. Phone 2-4036.



## IN THE MARKETS

**STOCKS.** Soybean carryover stocks in all storage positions on Oct. 1, are estimated at 21 million bushels, by Agricultural Marketing Service crop reporting board.

From an estimated supply of 490 million bushels (carryover Oct. 1, 1957, of 10 million plus 1957 preliminary production of 480 million bushels) a disappearance of about 469 million bushels is indicated for the crop year by the Oct. 1 stocks. Actual disappearance for the period includes nearly 354 million bushels processed for oil, about 86 million bushels exported and seed and feed about 31 millions.

Stocks of soybeans, Oct. 1, 1958, with comparisons (1,000 bu.)

Position	Oct. 1 Av. 1947-56	Oct. 1 1957	July 1 1958	Oct. 1 1958
On farms <sup>1</sup>	2,449	3,623	26,529	2,183
Terminal <sup>2</sup>	767	3,539	10,839	2,635
Commodity Credit Corp. <sup>3</sup>	166	0	0	2,012
Processing plants <sup>1</sup>	684	1,493	36,194	4,643
Int. mills, elev. & whses. <sup>1,4</sup>	635	1,242	33,778	9,610
Total	4,701	9,897	107,340	21,083

<sup>1</sup> Estimates of the crop reporting board. <sup>2</sup> Commercial stocks reported by Grain Division, AMS, at 45 terminal cities. <sup>3</sup> Owned by CCC and stored in bins or other storages owned or controlled by CCC; other CCC-owned grain is included in the estimates by positions. <sup>4</sup> All off-farm storages not otherwise designated, including merchant mills.

Stocks of Soybeans, Oct. 1, 1958 (1,000 bu.)

	Off-farm total <sup>1</sup> Oct. 1		Total <sup>2</sup> all positions Oct. 1	
	1957	1958	1957	1958
Ohio	166	322	166	322
Indiana	396	409	1,167	621
Illinois	2,088	1,166	2,750	1,547
Minnesota	397	2,422	1,185	3,244
Iowa	970	10,069	1,270	10,287
Missouri	93	2,566	275	2,601
North Carolina	176	310	310	310
Unallocated and others*	1,988	2,268	2,618	2,783
U. S.	6,274	18,900	9,897	21,083

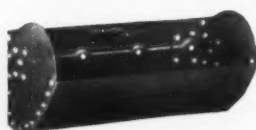
\* Other states and unallocated to avoid disclosing individual operations. <sup>1</sup> Includes stocks at interior mills, elevators and warehouses, commercial stocks reported by Grain Division, AMS, at terminals, and those owned by Commodity Credit Corp. which are in bins and other storages under CCC control. <sup>2</sup> Off-farm total plus farm stocks.

**PRICE SUPPORT.** 1958-crop soybeans put under price support through Sept. 30, 1958, compared with totals of 1957 crops put under through Sept. 15 and Oct. 15 a year earlier, in bushels, reported by Agricultural Marketing Service.

Ware-house stored loans	Farm stored loans	Total under support through Sept. 30, 1958	Total under support through Sept. 15, 1957	Total under support through Oct. 15, 1957
143,316	0	143,765	0	2,783,510

Purchase agreements included in the above total under support through Sept. 30 amount to 449 bushels.

### A Sales Record of More Than 15 MILLION SUPERIOR ELEVATOR CUPS DP-OK-CC-V



For Better Results—Longer Life—More Capacity

"Elevator Cups Is Our Business, Not A Sideline"

**K. I. WILLIS CORPORATION**  
MOLINE, ILLINOIS

**EXPORTS.** Preliminary data on U. S. exports of soybeans and soybean oil for August 1958, with comparable data for August 1957 and cumulative totals for the marketing years 1956-57 and 1957-58, reported by Foreign Agricultural Service, U. S. Department of Agriculture.

Unit	August		October-August	
	1957	1958	1956-57	1957-58
Soybeans	7,833,349	6,503,986	80,852,088	83,857,954
Soybean oil:				
Crude	13,663,788	67,802,994	369,314,195	205,291,585
Refined but not further processed	5,150,136	1,513,234	84,481,481	126,562,024
Refined, deodorized and hydrogenated	1,638,247	21,302,697	326,259,554	367,806,490

Soybeans: Inspections for export by ports and country of destination, October 1957-September 1958 (1,000 bu.)

	Philadel- phia	Balti- more	Norfolk	New Orleans	Mobile	Port Allen	Total 1957-58	1956-57
Canada							9,929	10,146
Norway	75	537	202	338			1,152	1,415
Denmark		187		2,914	1,494		4,595	4,451
United Kingdom	280	688	770	214			1,952	1,615
Netherlands	489	1,114	2,394	9,818	1,884	1,711	17,410	19,496
Belgium		535	60	1,504	567	486	3,152	5,302
France		37		246			283	1,392
West Germany	75	578	514	7,499	736	1,694	8,702	9,107
Poland		799	630	347			1,776	328
Italy				52	19		71	15
Israel			352	2,591		365	3,308	2,507
Philippines				15			15	14
Korea				1,968			1,968	1,625
Taiwan (Formosa)	193	802	755	1,768		349	3,867	2,788
Japan	73	346	499	18,935	778	7,098	27,729	24,567
Morocco					228		228	
Other			56	341			397	705
Total	1,185	5,623	6,232	46,156	5,478	11,931	86,534	85,473

Note: Data are based on weekly reports of inspections for export by licensed inspectors and do not include rail or truck movement to Canada or Mexico. In some cases the ultimate destination of the soybeans exported is not shown on the inspection reports, therefore the quantity of each country may vary from official Census data, which are based on custom declarations. Table includes 7,278,000 bushels shipped to Canada from Chicago and 2,651,000 from Toledo. Toledo shipments include 98,955 bushels from Saginaw, Mich.

Soybeans: Inspections for export by ports and lake shipments to Canada September 1958 (1,000 bu.)

Atlantic		Lake Ports	
Norfolk	13	Chicago	268
Subtotal	13	Subtotal	268
Gulf		Totals Sept. 1958	
New Orleans	2,079	Jan.-Sept. 1958	3,029
Mobile	558	Jan.-Sept. 1957	46,263
Port Allen	111		48,671
Subtotal	2,748		

Based on weekly reports of inspections for export by licensed inspectors and does not include rail and truck movement to Canada or Mexico.

Soybeans: Inspections for export by coastal areas and country of destination, September 1958 (1,000 bu.)

Atlantic		Lake Ports	
Netherlands	13	Taiwan (Formosa)	298
Subtotal	13	Japan	1,081
Gulf		Subtotal	2,748
Netherlands	558	Canada	268
Belgium	111	Grand total	3,029
West Germany	369	Total Jan.-Sept. 1958	46,263
Philippines	331	Total Jan.-Sept. 1957	48,671

Note: Data are based on weekly reports of inspections for export by licensed inspectors and do not include rail or truck movement to Canada or Mexico. In some cases the ultimate destination is not shown on the inspection reports, therefore, the quantity of each country may vary from official Census data, which are based on custom declarations.

Title I, P.L. 480 shipments for July-September

September 1958			July-September 1958		
Metric tons	Unit	Quantity	Metric tons	Unit	Quantity
Cottonseed oil	688	lb.	1,517,000		
Soybean oil	37,539	lb.	82,758,000	94,603	lb.
Operations division, Foreign Agricultural Service, U. S. Department of					208,563,000

**STOCKS ON FARMS.** Stocks of old-crop soybeans on farms Oct. 1 are estimated at 2.2 million bushels, according to Agricultural Marketing Service. This compares with 3.6 million bushels on farms a year ago and the 10-year Oct. 1 average of 2.4 million bushels.

Disappearance from farms during the July-September quarter amounted to 24.3 million bushels, about a fourth less than last year's record disappearance but still the third highest of record. July 1 farm stocks were relatively high but with prospects of a record 1958 crop, there was little incentive to carry over old-crop soybeans. Disappearance during the July-September quarter represents a higher proportion of the July 1 stocks this year than for any year of record.

Three-fourths of the U. S. carryover farm stocks are in the four states of Indiana, Illinois, Minnesota, and Iowa.

Soybean stocks on farms on Oct. 1—old crop (1,000 bu.)

Average 1947-56			Average 1947-56		
1947-56	1957	1958	1947-56	1957	1958
N. Y. ....	6	6	Kans. ....	34	30
N. J. ....	8	16	Del. ....	10	34
Pa. ....	21	16	Md. ....	21	44
Ohio ....	301	156	Va. ....	24	29
Ind. ....	243	771	N. C. ....	44	134
Ill. ....	530	662	S. C. ....	15	15
Mich. ....	16	42	Go. ....	3	22
Wis. ....	14	26	Ky. ....	14	6
Minn. ....	245	788	Tenn. ....	19	8
Iowa ....	536	300	Ark. ....	37	54
Mo. ....	220	182	Okla. ....	3	2
N. Dak. ....	7	115	Texas ....	7	4
S. Dak. ....	33	129	U. S. ....	2,449	3,623
		138			2,183

**FACTORY USE VEGETABLE OILS** for July and August 1958. Reported by Bureau of the Census (1,000 lbs.)

Factory production and consumption, and factory and warehouse stocks, August 1958-July 1958

	Factory production		Factory consumption		Factory and warehouse stocks	
	August 1958	July 1958	August 1958	July 1958	August 31, 1958	July 31, 1958
Cottonseed, crude ..	48,129	45,054	50,414	53,996	33,025	37,972
Cottonseed, refined ..	47,029	49,368	91,901	82,658	94,564	129,763
Soybean, crude ..	340,868	327,856	295,289	267,847	238,214	243,232
Soybean, refined ..	279,672	251,997	308,269	268,445	98,526	120,324
Vegetable foots (100% basis) ..	18,204	18,317	13,731	.....	53,846	.....
Hydrogenated vegetable oils—						
Edible:						
Cottonseed ..	22,748	21,433	22,459	19,232	10,222	10,505
Soybean ..	153,695	118,194	116,581	117,870	46,479	41,719
Other ..	6,595	5,836	5,673	5,796	3,061	3,145
Margarine <sup>1</sup> ..	118,020	120,884	(NA)	(NA)	30,752	32,406
NA—Not available. <sup>1</sup> Data for stocks exclude quantities held by consuming factories.						

Factory consumption of vegetable oils, by uses, during August 1958

	Edible products			Inedible products		
	Shortening	Margarine	Other edible	Soap	Paint and varnish oils <sup>1</sup>	Lubricants and other inedible <sup>2</sup>
Cottonseed, refined ..	12,170	488	2,355	(3)	(3)	(3)
Peanut, refined ..	109	(3)	511	(3)	(3)	(3)
Soybean, crude ..	.....	.....	(3)	23	273	(3)
Soybean, refined ..	51,822	9,596	11,923	(3)	6,693	(3)
Foots, vegetable, raw and acidulated (100% basis) ..	.....	.....	.....	2,182	(3)	(3)
Hydrogenated vegetable oils, edible:						
Cottonseed ..	8,697	11,086	2,676	.....	.....	.....
Soybean ..	42,759	69,855	3,887	.....	.....	(3)
Other ..	2,193	2,174	(3)	.....	.....	.....

<sup>1</sup> Includes quantities consumed in lubricants, greases, cutting oils, dielectric oils, core oils, brake fluids, and metal working. <sup>2</sup> Quantities consumed in linoleum and animal feeds are included in above totals.

<sup>3</sup> Not shown to avoid disclosure of figures for individual companies.

Consumption of oils in fat splitting

	1958		1957	
	August	July	Jan.-August Cumulative	Jan.-August Cumulative
Soapstocks				
Vegetable foots ..	6,902	5,566	49,268	9,965
Source: U. S. Census Bureau.				62,911

NOVEMBER, 1958

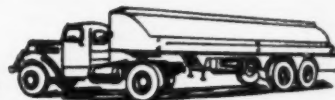
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**STOCKS.** Agricultural Marketing Service's commercial grain stocks reports for close of business on Friday or Saturday preceding date of report (1,000 bu.)

	Sept. 30	Oct. 7	Oct. 14	Oct. 21
<b>U. S. soybeans in store and afloat at domestic markets</b>				
Atlantic Coast .....	56	54	664	48
Gulf Coast .....	1,326	976	1,298	1,577
Northwestern and Upper Lake .....	49	30	244	701
Lower Lake .....	861	2,437	7,232	12,036
East Central .....	1,140	2,904	4,483	5,860
West Central .....				
Southwestern and Western .....	965	1,276	1,934	3,048
Total current week .....	4,397	7,677	15,855	23,270
Total year ago .....	3,887	6,843	11,047	15,722

	Sept. 30	Oct. 7	Oct. 14	Oct. 21
<b>U. S. soybeans in store and afloat at Canadian markets</b>				
Total current week .....	18	0	0	0
Total year ago .....	0	0	62	19

	Sept. 30	Oct. 7	Oct. 14	Oct. 21
<b>Total North American commercial soybean stocks</b>				
Current week .....	4,415	7,677	15,855	23,270
Year ago .....	3,887	6,843	11,109	15,741

**Primary receipts (1,000 bu.) of soybeans at important interior points for week ending:**

	Sept. 26	Oct. 3	Oct. 10	Oct. 17
Chicago .....	621	1,320	4,147	4,649
Indianapolis .....	82	539	1,199	1,044
Kansas City .....	193	556	1,524	1,082
Minneapolis .....	21	233	675	622
Omaha .....	3	68	160	158
Peoria .....	135	100	189	157
Sioux City .....	7	21	46	22
St. Joseph .....	2	89	197	320
St. Louis .....	835	1,599	2,116	1,536
Toledo .....	56	237	1,213	1,928
Wichita .....	33	71	21	124
Totals .....	1,958	4,833	11,487	11,642
Last year .....	1,391	4,316	8,298	6,653
Total Chicago soybean stocks .....	819,000	2,265	6,295	10,573

**INSPECTIONS.** Soybeans inspected by grade and percent, reported by Agricultural Marketing Service.<sup>1</sup>

Grade	September 1958 <sup>2</sup>	August 1958	September 1957	Oct.-Sept. 1957-58	Oct. Sept. 1956-57
	1,000 bu. Pct.	1,000 bu. Pct.	1,000 bu. Pct.	1,000 bu. Pct.	1,000 bu. Pct.
No. 1 .....	5,736 19	3,438 24	4,599 31	84,115 23	56,920 18
No. 2 .....	14,091 47	6,749 47	6,987 46	161,127 43	132,966 42
No. 3 .....	7,926 27	2,743 19	2,223 15	87,697 24	69,347 22
No. 4 .....	1,396 5	1,109 8	908 6	28,162 8	41,036 13
Sample .....	478 2	294 2	337 2	8,292 2	17,800 5
Total .....	29,627 100	14,333 100	15,054 100	369,393 100	318,069 100

<sup>1</sup> Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,750 bushels. <sup>2</sup> Of the September receipts, all were yellow soybeans. Inspections of soybeans in September included 3,867,000 bushels as cargo lots, 1,416,132 bushels as truck receipts, and the balance as carlot receipts.

**MELLORINE.** U.S. production in September of mellorine and other frozen desserts made with fats and oils other than milk-fat was estimated at 3,780,000 gallons, according to the USDA crop reporting board. The September output was 24% larger than the month's production a year ago and 45% above the 1952-56 September average. In the first 9 months of this year production totaling 32,650,000 gallons was 16% greater than the output for the similar period in 1957 and 52% greater than the 1952-56 average for the 9 months.

<b>Production of mellorine and other frozen desserts made with fats and oils other than milk-fat, United States, 1958</b>						
Month	1952-56 Average*	1956* Thousand gallons	1957* Thousand gallons	Estimated 1958 <sup>1</sup> Thousand gallons	Change from: 1952-56 Av. Percent	1957 Percent
January ..	1,300	1,862	1,957	2,300	+77	+18
February ..	1,490	2,095	2,199	2,410	+62	+10
March .....	1,957	2,728	2,527	2,805	+43	+11
April .....	2,108	2,759	2,881	3,400	+61	+18
May .....	2,552	3,540	3,538	4,200	+65	+19
June .....	3,098	3,767	3,609	4,395	+42	+22
July .....	3,196	3,826	4,386	4,820	+51	+10
August .....	3,108	3,837	4,052	4,540	+46	+12
September ..	2,613	2,887	3,039	3,780	+45	+24
Nine month total .....	21,422	27,301	28,188	32,650	+52	+16

\* From enumerations. <sup>1</sup> Revised.

**PROCESSING OPERATIONS.** Reported by Bureau of the Census for August and September 1958.

**Primary products except crude oil at crude oil mill locations. Production, shipments and transfers, and stock, September 1958-August 1958 (2,000 pounds)**

	Production		Shipments and transfers		Stocks end of month	
	Sept. 1958	August 1958	Sept. 1958	August 1958	Sept. 30, 1958	Aug. 31, 1958

Soybean:						
Cake and meal .....	591,293	740,537	627,809	717,269*	48,066	84,582*
Flour .....	11,045	10,712	11,807	10,308	1,374	2,136

\* Revised.

**Soybeans: Net receipts, crushings, and stocks at oil mills, by states, September 1958-August 1958 (2,000 pounds)**

	Net receipts at mills <sup>1</sup>		Crushed or used		Stocks at mills	
	September 1958	August 1958	September 1958	August 1958	Sept. 30, 1958	Aug. 31, 1958
U. S. ....	748,416	440,796	751,968	948,598	416,138	419,690
Illinois .....	373,320	163,345	273,071	334,565	204,232	103,983
Indiana .....	(2)	(2)	79,616	86,206	15,113	(2)
Iowa .....	88,633	96,370	130,260	142,889	70,397	112,024
Kansas .....	24,509	(2)	(2)	(2)	17,801	(2)
Kentucky .....	(2)	(2)	(2)	(2)	(2)	(2)
Minnesota .....	45,625	52,354	53,852	85,268	16,361	24,588
Missouri .....	28,722	13,034	30,069	37,223	23,028	24,375
Nebraska .....	(2)	(2)	(2)	(2)	(2)	(2)
No. Carolina .....	(2)	(2)	(2)	(2)	(2)	(2)
Ohio .....	38,327	15,966	77,691	97,461	13,319	52,683
Texas .....	(2)	(2)	(2)	(2)	(2)	(2)
All other .....	149,280	99,727	107,409	164,986	55,887	102,037

<sup>1</sup> Net receipts for each state are derived by subtracting total shipments of beans from oil mills, from gross receipts at mills. <sup>2</sup> Included in "All other" to avoid disclosure of figures for individual companies.

**Soybean products: Production and stocks at oil mill locations, by states, September 1958-August 1958**

	Crude oil (thousands of pounds)		Coke and meal (tons)	
	Production	Stocks	Production	Stocks
	Sept. 1958	August 1958	Sept. 1958	August 1958
U. S. ....	269,825	340,868	50,930	99,434
Ill. ....	101,109	125,181	11,721	25,102
Ind. ....	28,090	31,550	7,069	3,672
Iowa ....	44,991	50,502	7,823	15,447
Kans. ....	(1)	(1)	701	(1)
Ky. ....	(1)	(1)	(1)	(1)
Minn. ....	19,788	25,301	9,737	33,392
Mo. ....	11,138	13,658	1,096	1,536
Nebr. ....	(1)	(1)	(1)	(1)
No. Car. ....	(1)	(1)	(1)	(1)
Ohio ....	26,888	35,000	5,587	5,686
Texas ....	(1)	(1)	(1)	(1)
All others .....	37,821	59,676	7,196	14,599

\* Revised. <sup>1</sup> Included in "All other" to avoid disclosure of figures for individual companies.

**PRICES.** Average prices for soybeans received by farmers, effective parity, and support rates, reported by Agricultural Marketing Service (dollars per bushel).

	Average farm price	Effective parity	Av. price as percent of parity	National average price support rate
Sept. 15 1958	Aug. 15 1958	Sept. 15 1957	Sept. 15 1958	Sept. 15 1958
1.98	2.11	2.13	3.04	65
1.98	2.11	2.13	3.04	65

Average farm and parity prices from crop reporting board.

**Prices of byproducts feeds, by weeks, May-September 1957 and 1958 (dollars per ton)**

	Soybean meal 44% Chicago		Cottonseed meal 41% Memphis	
Week ended <sup>1</sup>	1957	1958	1957	1958
May 2 .....	57.00	70.50	54.00	63.00
May 9 .....	57.00	69.00	52.50	63.00
May 16 .....	57.50	67.50	51.25	63.00
May 23 .....	56.50	65.50	51.00	63.00
May 30 .....	56.50	66.50	51.75	62.75
June 6 .....	57.00	66.00	52.00	63.25
June 13 .....	57.00	65.50	52.00	64.00
June 20 .....	55.00	70.00	51.75	63.25
June 27 .....	54.50	71.50	52.25	63.00
July 4 .....	55.50	72.25	52.00	62.50
July 11 .....	57.50	76.50	53.00	63.50
July 18 .....	58.50	79.50	53.75	68.00
July 25 .....	59.00	88.50	56.00	70.00
August 1 .....	60.00	83.50	55.50	69.50
August 8 .....	63.50	79.00	58.50	68.00
August 15 .....	63.50	71.50	60.00	64.00
August 22 .....	65.50	66.50	58.00	64.00
August 29 .....	65.50	69.50	57.00	62.00
September 5 .....	64.50	72.50	55.50	61.50
September 12 .....	61.00	68.50	53.00	60.00

<sup>1</sup> Wholesale prices of byproduct feeds are for the Tuesday within the week. Agricultural Marketing Service.



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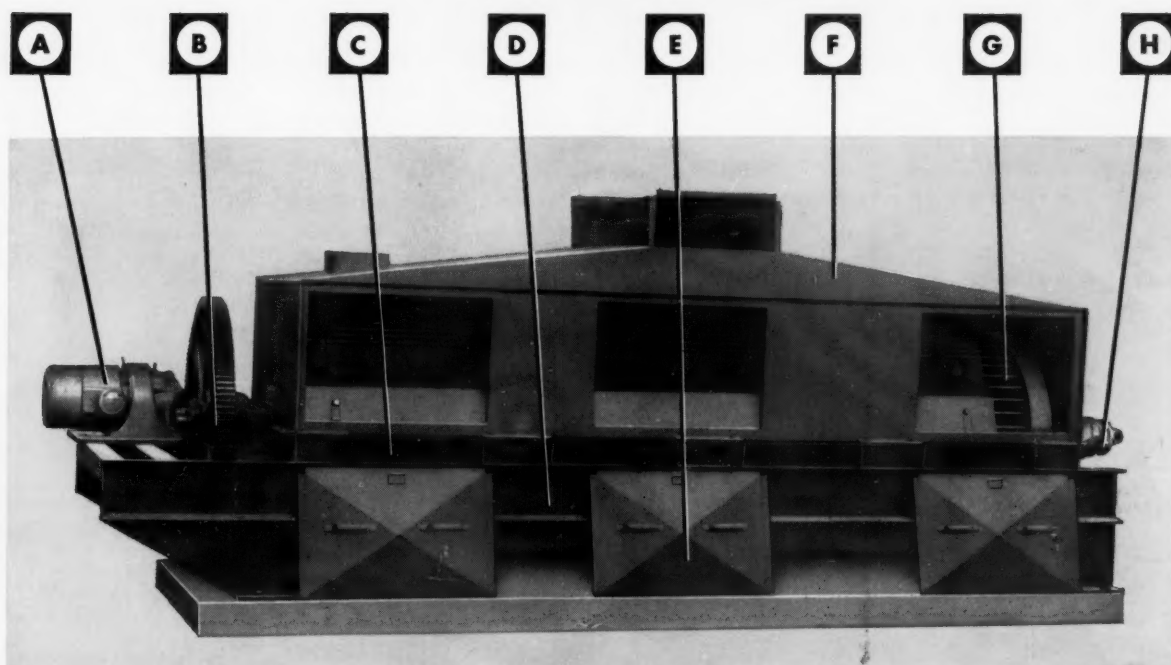
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